

Profits.

Pleasures.

A Treatise of
FRUIT-TREES

Shewing the manner of Grafting, Setting, Pruning, and Ordering of them
in all respects: According to divers new and easy Rules of experience;
gathered in y^e space of Twenty years.

Whereby the value of Lands may be much improv'd, in a shorttime, by
small cost, and little labour.

Also discovering some dangerous Errors, both in y^e Theory and Practise
of y^e Art of Planting Fruit-trees.

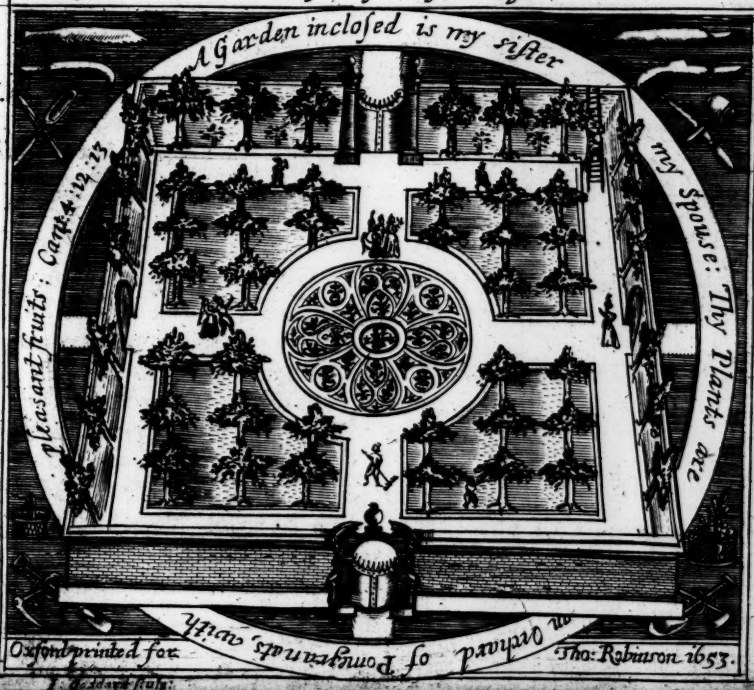
With the Alimentall and Physicall vse of fruits.

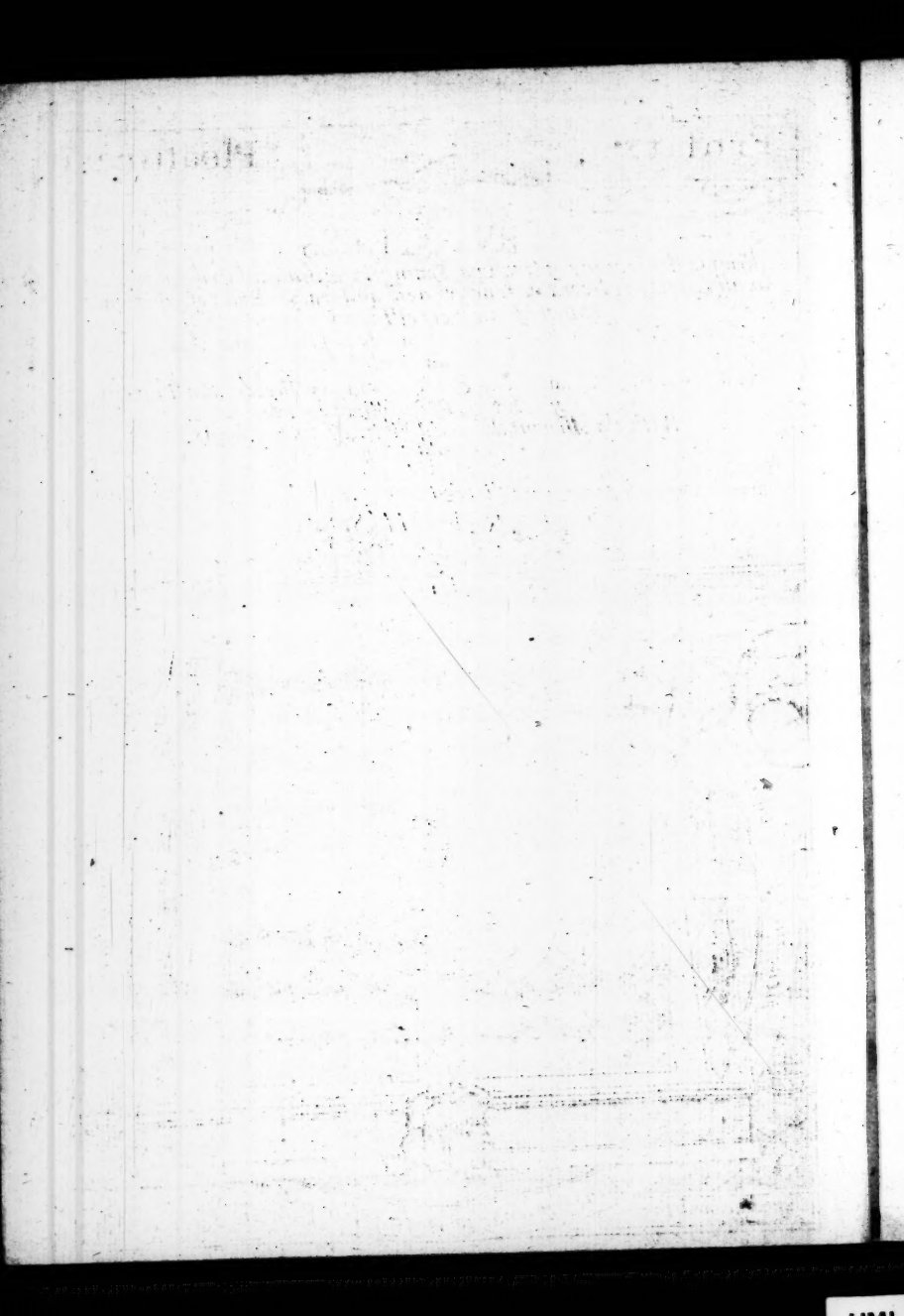
To geather with

The Spirituall vse of an Orchard: Held forth in divers Similitudes be-
tweene Naturall & Spirituall Fruit-trees: according to Scripture & Experiēce.

By **RA: AUSTEN.**

Practiser in y^e Art of Planting







To the Worshipfull

SAMUEL HARTLIB Esquire

My much Honoured Friend.



Am not unmindfull (worthy Sir) under what engagement you stand upon mine account, to the Publique; In the late *Treatise of improvement of Lands*, by our deceased friend Mr *Blith*, which you were pleased so freely to undertake for mee; And which was renewed againe, in

the *Designe for Plenty*.

According to my duty therefore, I have endeavoured to answer your (and others) expectation, in this my ensuing *Discourse of Fruit-trees*.

It is agreed on all hands, That this worke of *Planting Fruit-trees* (through the blessing of God) is of vast Profit, where it is diligently, and skilfully undertaken.

Mr *Blith* in his Book, discovers the great *Improvement of Lands*; some to a *Five fold*, some to a *Tenne*, and some to a *Twenty fold value*: And the highest way there mentioned, is by *Planting Fruit trees*: As may be
 scene

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scene at large, *Pag. 262, 263. &c.* of his Worke.

And in your *Legacy of Husbandry*, it is acceompted a great deficiency in *England*, that we have no more *Fruit-trees Planted*, which would be a chiefe meanes to enrich this *Common-wealth*, in many respects; And in particular, with such a *Commodity* as that we should not need to bestow our monies for *French Wines*, or the like, having *Liquors*, (*Cyder, Perry, Cherry-wines, &c.*) as good, or better, made of our own fruits: As it is there observed.

If men would *Plant Fruit-trees*, not only in *Gardens*, but also in many of their *Fields and Hedges*; This course (after some years) might save the expence of many *Thousand Quarters of Mault*, yearly, in the Nation. And many *Thousand Loades of Wood*, and other *Fuell*, in making *Mault*, and as much (it may be) in *Brewing Beere*. And many thousand *Acres* sowed yearly with *Barly*, might be sowed with *Bread-corne*, or turned into *Pasture-grounds*, by reason of the abundance of those most healthfull *Liquors*, *Cyder* and *Perry* that might be yearly made, Besides great store of *Wood*, would be got for *Fuell*, by the *Prunings of the Fruit-trees*, and *Old Trees* past bearing, with *spetiall Wood for Joyners*, and many other purposes.

This likewise might be one chiefe way (among others) for imploying and setting on worke, very many *Poore People*, (in Inclosing, and preparing *Grounds* for *Planting*, and many other *Workes*) (according to the late consultations of the *Parliament*) whereby they might maintaine themselves, and profit others, in stead of burthening of them.

Yea; hereby would accrue to the *Poore* (and the whole Nation) many great advantages, in severall respects

The thoughts of the diligent tend only to plenteousnesse.
Prov. 21. 5.

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spects: First, a Freedome, and deliverance of multitudes from *Idleness, Beggery, Shame, and consequence, Theft, Murder, and (at last) the Gallows.*

Secondly, *Positive advantages; Meate, Drinke, Clothing, Riches, and Profits,* to themselves and others.

If the higher powers (whom God hath set up to designe, and labour for the welfare, and prosperity of his People) would please to make a *Law*, (there being *Lawes* of a thousand times lesse consequence) for the *Inclosure and Plantation*, of some of the *Wast, and Common Grounds*, Whereof there are many Thousand Acres in this Nation, (such as are most fit for *Improvement*, according as is largely, and with wisdom and judgement, set forth in the late *Treatise* entituled, *Bread for the Poore*; And in another *Treatise*, entituled *A Designe for Plenty*;) there would (by the blessing of God on our Labours) be *Bread* indeed for the *Poore*, and *Wine* too; Yea, *Riches, and Lands of Inheritance*, to those who are not now worth a *Groat*.

For in divisions, and inclosures of *Wast, and Common Grounds*, (by Persons appoynted for that purpose,) why should not the *Poore* have their share; and proportion, as well as their rich Neighbours, and that to them, and their heires for ever; yea, let the *Poore* be first provided for.

Are not these the times of the Gospell prophesied of *Esay 49. 19, 20.* When the *Wast and desolate places shall be inhabited*; The people of God being multiplied (as in these our daies they are, more then in former times) they now say to *Authority*, as *vers. 20.* *The place is too strait for us, give place to us that we may dwell.*

Many of the *Wast and Common Grounds* (being inclosed) might be improved unto farre greater ad-

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vantages, then now they are (both as to the *Lords of the Waſts*, and others claiming interest in them) for the encrease of *Cattell*, both in *Number and greatneſſe*; our breed of *Horſes* might then be fit for *Warre*, where as now the *Commons* ſtarve and ſpoyle them, as to *ſuch ſervice*: And all ſorts of *Corne, Fruits of Trees, Timber, Fuell, Hempe, Flaxe*, and many other *Profits*, might be multiplied, whereby the Nation would abound with all outward neceſſaries for it ſelfe, and the overplus to transport to other parts, for the enriching & ſtrengthening of this Nation, ſtill more and more; in ſtead of ſending out our *Monies and Commodities* for ſupplies from them.

And hereby *this Nation* might become able (under the hand of God) to ſupport it ſelfe, and helpe to uphold others alſo, who are friends to us, and be a terror to all thoſe that contend with us.

An eminent perſon once ſaid of *this Nation*, that it is a very *Garden of delights, and a Well that cannot be exhausted*: What then would it be, did it abound with goodly *Fruit-trees*, and other *Profits*, where now are barren *Waſts*: Might it not then be called another *Canaan*, flowing with *Milke and hony*, of which it is recorded, that there were *Fruit-trees in abundance*. *Nehem. 9. 25.*

The more obſtructions we have from *Forraine* parts, the more need we have to labour diligently for all neceſſary, and uſefull things, within our own Nation, that we may be able to ſubſiſt without the help of others: ſo that *this work of Planting Fruit-trees, for improvement of Lands*, is fit to be carried on as well, (if not much rather) in *theſe times of Warre, as in times of Peace.*

Upon.

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Upon all which Accompts it is my humble desire,
That you (*Sir*) who have laboured, and done so
much already for the *Publique*, would still be pleased
to be assistant, and instrumentall for the promoting
and setting on foot, the *Work of Planting Fruit-trees*
in this Nation, more then in former times: According
as is set forth in your *Legacy of Husbandry*; The *Designe*
for Plenty; and other of your Published *Treatises*, tend-
ing to *generall Profit*, and the great encouragements
in this worke which I have (from time to time)
received from you: for all which I shall be still ready
(thankfully) to acknowledge my selfe.

Your very much engaged Servant:

R^A: AUSTEN.



To the Reader.

Here are extant many Treatises and Histories of Trees and Plants, shewing us, the Kinds, Formes, Natures, and Vertues of them: some likewise teach us the manner of Propagation of Fruit-trees, their Sowing, Grafting, Setting, Preservation, and Ordering: But most of these Authors speake in an unknown Tongue to the plaine English Husbandman, (whose encouragement and direction, I shall herein much endeavour) Only some few small peeces have beene offered to him which he may understand, but very much defective in many necessary, and principall parts of the Art of Planting Fruit-trees: And not only so, but likewise (some of them) are full of dangerous and hurtfull instructions, and things notoriously untrue, as shall particularly appeare in the ensuing discourse. See pag. 78.

So that a plaine, sound, Experimentall worke upon this subject, hath been much wanting in this Nation.

The Art of Planting Fruit-trees is (among Ancient Authors) called Husbandry, being it is one part of the Husbandmans work: though in many parts of this Nation Husbandmen have little skill in it, their labour being chiefly Tillage of the ground for Corne. But this is a part of the Husbandmans worke as well as that, yea: and the chiefest, and worthiest part: Adam in time of his Innocency was employed in this part of Husbandry about Fruit-trees, as is shewed pag. 12.

But when he had sinned, he was put away from this worke to till the ground, a lower and inferior labour. Gen. 3. 23. The Lord God sent him forth from the Garden of Eden, to till the Ground.

We see likewise the Scripture calls it Husbandry, Noah is called an Husbandman when he planted a Vineyard Gen. 9. 20. God (blessed for ever) is called an Husbandman, for that he pruneth, purgeth, and ordereth his Mysticall Vine-tree the Church, Ioh. 15. 1. So that I shall keep the phrase throughout the Worke:

I have seene (I suppose) the best Workes, both of Ancient, and Late Writers upon this Subject, and have learned from them what I could, for accomplishment of this Art, and have observed the practise, & experiments
of

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of many from time to time, concerning it, and have improved them to my own advantage.

And likewise I have set my selfe to the Practice of this worke for the space of Twenty yeares, and more: endeavouring to find out things of use and profit, by Practice and Experience, that I might speake upon better and surer grounds, then some others who have written upon this Subject, for Experience guides, and informes Reason in many things; in which (without Experience) it would often erre. Some who have taught this Art of Planting Fruit-trees, have beene in it (I conceive) only Contemplative men, having little, or no Experience in it: so that in many things they have erred, and that grossely, as shall appeare in due place.

A Learned Author saies, The writings of speculative men upon active matter (for the most part) seemes to men of experience to be but as dreames and dotage: And that it were to be wished (as that which would make Learning indeed solid and fruitfull) that Active men would or could become Writers.

Study, and Practice (by degrees) frame new Arts, and adde to the old: Per varios usus Meditando extunderet Artes: paulatim.

Experience is called the Perfecter of Arts, and the most sure, and best teacher in any Art, Contemplation and Action are the two Leggs whereon Arts runne stedily and strongly, and the one without the other, can but hop, or goe lamely: They are the two Eyes wherewith men see natures secrets clearly, but the one alone discernes but dimly: And hence it followes that some who were only contemplators of nature without experience, and would needs adventure to write, & give instructions touching the Practique part of this Art of Planting Fruit-trees, have in many things (as the aforesaid Author saies) presented us with smoake instead of the lucide flames of light: They have indeed shewed us a comely and beautifull body, painted according to Art, but yet livelesse and without a spirit, And have offered us shells and huskes instead of kernells.

But now, speculation and Action, are as Soule and Body united, which labouring together, worke out both Profit and Pleasure: many advantages to our selves and others. When Speculation and practice, Art and Nature, are matched together, they are pregnant and fruitfull, but the one alone, wanting a meete helper, what fruits can it bring forth: Experience (as a Philosopher saies) is the Root of Art: and it may well be so called, from whence springs a numerous multitude of new Experiments

L. Ba. Advanc. Lear.

Virg. Geor.

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Experiments: for from one Room, or single Experiment, (though perhaps a poore and meane one in it selfe) if thoroughly weighed with Reason and judgement, may arise many rich and rare inventions: And it's most true, which the Lord Bacon saies to this purpose: As through a small hole, or cranny, a man may see great Objects, so through small and contemptible instances, men may see great Axioms, singular secrets of nature. Men will labour hard, and a long time in some labours full of hazard and danger, and perhaps unjust too, and all for a little profit: but here, in this employment, men may with a little labour, in a short time, without hazard or danger, and that justly, obtaine great, and many profits, and those with Pleasures superadded.

Workes, and labours, which have in them but a vaine, and unprofitable pleasure, are approved but only of some sensuall persons. And such labours yeelde but only Profit, and doe not ease the paines with some Pleasantnesse in them, are yet harsh, and disliked of many, but such as yeeld both Profit and Pleasure, are universally liked & allowed of all, according to the Poet,

Omne tulit punctum, qui miscuit utile dulci:

Either of these is the better, because of the other joynd with it, when they runne along, hand in hand, the Profit is the more, because of the Pleasure, and the Pleasure is more, because of the Profit.

Now therefore: That men may obtaine yearly a plentiful harvest of Profits and Pleasures, I have endeavoured to remove whatsoever might hinder, and have laid downe some Arguments of encouragement to set upon, and prosecute the means to obtaine them, discovering the best way I can find out, how they may be gotten with most speede, and kept with most security.

If any man think the Divine, and Humane Arguments (preceding the worke) to be needlesse, because generally men know, that Planting Fruittrees is a very profitable worke, none doubt it.

Answer. Some know it by experience many others doe not.

And although men are convinced of the profitablenesse of the worke, yet there is need of some quickning Motives to it; And I know none more prevalent then those taken from Profits, and Pleasures; considered in so great and so many respects: especially if we take in the Spiritual part, unto which the Arguments may be as properly referred, as to the Natural.

Or if any account the Arguments too large, concerning the Porch to be too big for the Houle.

It is Answered: such a Judgement arises from a mistake, for the whole worke



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Workes following the Arguments considered together, both the Naturall, and Spirituall part, is but one entire Treatise, as in the Title-Page is express: And besides; the worke (as yet) is not finished. There is (it may be) as much behind, which in time I hope will be perfected. Accept of what is made ready at present; which as it may be profitable to some in respect of Encouragements and Dispositions in the practise of the Worke, so also I desire it may be a meane to stir up others to doe some thing in the like kind for Publique Profit.

There are many good wits exercised about Toyes, and Trifles: some men bestow excessive Time, cost, and Labour, about meere shadows, and will deserve Marshall's Motto, *Turpis est difficile habere, nugas.*

L. 2. Epig.
86.

Et stultus labor est ineptiarum. While they might in the mean time, by the study and practise of this art, (in searching out many hidden secrets of nature and experiments) much advance themselves, and many others, both in respect of Temporalls, and Spiritualls. An ancient Author saies, Not he that knoweth many things, but he that knoweth things fruitfull is Wise.

This Art is a full store-House, out of which may be brought both Meate, Drink, and Money, it is a rich Myne, without bounds or bottom, out of which we may digg Profits and Pleasures great, and many, and worthy the study, and labour of the most wise and Learned.

The good of this Employment, both in the Theorique, and Practique part, spreads it selfe over all places in the World, to all persons in the world, from the Cradle to the Grave, from the beginning of the World, to the end of it; so that no worke can be more universally good than this.

Now therefore seeing there is so much profit, and advantage to be received from this employment of Planting-Fruit-trees both in Temporall, and Spirituall respects, Let us set about it, and labour in it, either with Body or mind, or both, That thereby the Glory of God, and Publique Profit (together with our owne advantages) may be promoted.

The blessing of God goe a long with us, and give the increase in all our labours, and prosper the workes of our hands.

This is my Advice to men, and Prayer to God. Who am

Thine in the best Services

R. AUSTEN.



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¶ ¶ ¶ 2





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Planting of Fruit-Trees, The best way of Improvement of Lands.



THE Profits of Orchards and Gardens, are very well known to many in this Nation, so that the things I hold forth to men, are not doubtfull, and questionable whether advantages will arise or noe, when they have bestowed their time, and labours about them, but Profits are as certaine (by the blessing of God) if men labour in them, as a harvest of Corne in Autumme, when the husbandman hath plowed, and sowed, in the spring or other season. *Worcestershire, Herefordshire, Gloucestershire, Kent,* and many other parts in this Nation, can sufficiently evidence the Profits of Orchards, and fruit-trees in the fields, and hedges: And those good *Common-wealths-men*, who have written of the Improvement of lands, have all agreed, that this is the highest way of improvement of any other.

Mr Blith in his Book intituled, *The Improver improved*, (a work doubtlesse of singular use,) hath asserted, That Planting Fruit-trees at such a distance as they cannot reach, when they have attained largest growth, they doe advantage the Land, even in respect of

Grasse, (although the common prejudice against *Fruit-trees in fields* is, that they spoyle Grasse) as that some Land not being worth above 10^s, or 13^s 4^d. an *Acre*, the Grasse (by planting *Fruit-trees* regularly upon it) was afterwards worth 30^s, or 40^s, or 50^s an *Acre*, And the *Fruits* upon the *Trees* may yeild some 3^l, some 5^l, Or some 6 or 8^l an *Acre*; See Pag. 262. of his Book.

And that in *Kent, Essex, Surrey, Middlesex*, and those parts, some Land that was not worth above 6 or 8^s the *Acre*, was by *Nurseries of young Trees, planting, and ordering of them*, in certaine years brought to be worth 20^l an *Acre*, and some 40 or more.

And further, he affirmeth, that some *Orchards* in those parts are worth to grasse Forty, or fifty *shillings* or 3^l an *Acre*, and are so let to Tenants: And the *fruits* of those *Trees* seldome yeild so little, as Double or treble the worth of the Grasse, many times five or six fold, or more, see Pag. 263. of his Book.

It may (perhaps) be objected: That *Fruit-trees* so planted make grasse (under, and about them) sower, that it is not so pleasant, and good for Cattle, as some other, where no *Trees* are.

It is Answered: Although it be not so pleasant altogether, as that where ther's no shade of trees, yet other advantages doe more then make amends. Its observ'd that such Grasse is earlier in the spring then upon other grounds, and that such grounds beare more, when its cut for hay, or if pastured it keeps more Cattle, then Lands of like quantity not so planted: And, besides, in a hot and dry summer, ther's grasse under, and about *Trees*, when its burnt up in other grounds.

My advice is therefore (all these Profits and advantages considered) that men set themselves diligently to this work of *Planting Fruit-trees*, for improvement of their Lands and Estates. Not only, that they plant good *Orchards and Gardens*, but also that they Plant round about their fields, and in their Corne, Pasture, and hay grounds, the fruit-trees at a large distance one from another 20 yards asunder, and that they suffer no branches to spread, within two yards from the ground, that so they may be out of the reach of Cattle / and may not be troublesome to workmen in plowing, sowing, reaping, and other works.

If the Plants are faire straight ones, of two yards high, or thereabouts

abouts, & fenced about to preserve them from Cattle at the first, (with some stakes or the like) they will in a few years preserve themselves, and will need but little labour about them afterwards as long as they live.

And hereby men may reape every yeare two harvests, (from one, and the same peece of land) the one of Corne, the other of fruits of trees, and the latter (when trees are growne larg,) (probably) will be the greater.

And in this respect this way of improvement of Lands, is much better then other wayes of profit; because in getting Corne, or raising profits by any other wayes of improvement, men must of necessity, bestow much money, time, and paines about them, every yeare, which eats up a great part of their profits, but in Planting fruit-trees, the worst is at first, after a few years, they yeild great profits, with little cost and labour. So that as was said fruit-trees in a few years, with small cost, and labour; will double, and treble, the value of Lands, and after many years, the advance of Profit will be manyfold.

But it may be Objected, That if all should plant, then such great profits could not be made, every man would have of his own.

I answer: that if all should plant fruit-trees that may conveniently plant; yet would there be multitudes every where to buy for all that. For consider, in a great City, or town, what a number of people there are, who have no Lands at all, not so much as a peece of ground belonging to their house, and many others but very small quantities, these will be buyers of the husbandmans fruits, and the wines that he makes of them.

And let us say what we will, or can, ther's many that have Lands which they might Plant, and improve to an exceeding great value, who will yet be idle, and slothfull, and object with Solomons sluggard ther's a Lyon in the way, something, or other that hinders: yet these men when they see fruits, will be as eager for them as any others, and therefore will be very good Chapmen, to buy the Fruits of the diligent husbandman.

Ob.

Ans.

Objections and Discouragements Concerning
Planting Answered.

Before I enter upon the work it selfe, it will be convenient to Answer some maine Objections, to remove discouragements about this work of Planting Fruit-trees that have kept off many from this profitable employment, & may stil hinder them unlesse remov'd. And then I will give some encouragements to it from *Divine, and Humane Arguments and Testimonies.*

1. Ob.

This is an Objection amongst many in the Northern parts: they say the Northerne Countries are so cold, that Fruit-trees will not prosper, nor beare fruits there.

Ans.

To this I Answer: That although it be true that the Northern Countries lye in a more cold Clymate then *Worcestershire Herefordshire* and those fruit Countries, yet I doubt not but that if they were as diligent in planting Fruit-trees in the North parts, as men are in these, they might have store of good fruits: so that some Cautions be observed in the nature of the Trees: Its true: Cold Countries are not so fitt for choice and tender fruits, as warme r Clymates, but there are diverse kinds of hardy fruits, both Apples, Pears, Cherries, which yearely experience shewes endure cold, and come to perfection, in cold springs when many other kinds are spoyled. Let such kinds therefore be sought for and Planted: And besides: those good husbands in those parts, who are diligent in Planting fruit-trees, have fruits answerable.

2. Ob.

Others say, that if they should plant fruit-trees, and bestow much labour and cost about them, when they come to perfection and bearing fruits they should be rob'd of all, or most, and the Trees would be spoyled, & who would Plant to be so serv'd.

Ans.

To this I Answer: That if there were no remedy, against this mischeife, it might indeed be a just discouragement: but this fear may be removed diverse ways.

And I advise, having made a good fence about the Orchard, keep therein a lusty Mastiffe or two; that will not be charmed in the night time, and the terror of them would keep most from adventuring upon such an Occasion,

Secondly: some that have good Orchards watch their fruits. If a man keep 2, or 3, or more servants, they may watch in their turns,

its

its no great matter, if you consider for what time only it is necessary, which is but from the time that fruits come to be worth getting, till they be ripe: and that's not long: And consider: it is in a pleasant season of the yeare, the paines and charge would be but little to the profit: we see men are vigilant and diligent much more then this would require upon farr lesse advantages.

3. But there is a third means to keep Orchards from being rob'd, which I esteeme best of any other, It is this: I would have every man (that hath land) to plant some fruit-trees for himselfe, that so they may not be thieves to their neighbours: and let those that have much fruit, spare a part to them that have but little, or none of their own, and be no niggards but liberall to their neighbours: And this bounty will bring a double blessing, first from God to increase the fruits; secondly from men not to diminish them.

But I hartily wish that such as make but a sport of robbing an Orchard, would but consider the affliction, and terrors of conscience that seized upon good *Austen*, for this very sin of robbing an Orchard, which he was guilty of before his conversion: he confesseth it with much greife, and aggravates it with noe lesse then tenne circumstances; crying earnestly for mercy and pardon: *Ecce Cor meum Deus meus, ecce Cor meum, quod miseratus es in imo abyssi.* 4. &c. When God lets loose the least sin to fight against a man and but to shew it selfe in its proper shape, it will terrifie the stoutest heart: *A wounded spirit who can beare?*

See the second Book of his Confessions. Chap.

But there is another *Objection* greater then the former: Men usually say, should we plant Fruit-trees it would be so long ere they come to perfection, and bearing fruits, that our hopes would faint, before we could see profit of our labours, perhaps they would not beare fruits of Sixteene or Twenty yeares growth.

3. Ob.

I Answer, that though the *Objection* were true, that trees Planted would be long ere they come to bearing fruits, perhaps 20 yeares or more, yet this should not discourage us: especially such as may have good hopes to enjoy the profits, and pleasures of them many years after, and then leave them to their Children and to posterity after them. But men are generally mistaken upon this Accompt, Fruit trees rightly ordered, will not be so long ere they beare fruits as they suppose: I shall shew a way that by Planting Fruit-trees, and ordering of them as I give directions

Ans.

rections (By the blessing of a divine hand that still attends honest labours) we may receive *Profit and Pleasure* from them in halfe *Twenty years*, yea in halfe that halfe, yea in lesse then in *five years*: sometimes the *third*, sometimes the *second year*, (of many kinds of fruit-trees) after Grafting: Experience proves it, though we must know, the fruit cannot be much, while the trees are so small, of particulars: yet a multitude of such trees will afford a multitude of fruits: *A Cisterne of water is but a multitude of drops.*

So then ; that Fruit-trees may be planted and come to bearing fruits in 5, 4, or 3, *years*, or sooner, the meanes is shew'd at large in the ensuing worke. So that I hope this grand discouragement (which hath so long and so generally kept men from this profitable work) will be remov'd.

Now (as I promis'd) I will lay down some *Excitements*, and *Encouragements* to the work of *Planting fruit-trees*.

Many large workes have been compos'd by Ancient Authors for the Instruction of the husbandman in this his principall work: And they have given this employment many and great commendations and praises, and it is accounted by them the cheifest of all earthly employments, because of the many *Profits and Pleasures* that come by it.

And because it shall appeare what Opinion and esteeme they have had of this course of life, and with what Praises they have set it forth, I will give you the particular expressions of some of them in their own words; And then give the summe of what they have said to the plain husbandman, and others, that else could not understand them.

The Prayses of the Ancients concerning the Husbandmans course of life in Planting Fruit-trees.

Agricultura quid sit,

M I H I videtur nihil aliud esse Agriculturam quam inspecta
 " Plantæ naturâ & Cœli & terræ ei idoneum cultum tribu-
 " ere, & (ut ita dicam) cœlum cum terra maritare, vel societatem
 " perquirere Cœli & terræ ad Arbores: Sed quum Cœlum nullo
 " modo queat flesti, oportet ut sedulus Agricola sitis varietate ut-
 " tatur, ut Cœlo facile Planta associetur.

"Agricolæ

"Agricolæ ad duas metas intendere debent, ad utilitatem, & voluptatem. Agricultura est Ars quæ docet usuram cum terra facere. Inter omnia enim quæ utilitatem simul & jucunditatem pariunt, ut ambiguum sit utilitatisne an amœnitatis plus habeat. Variis fructibus delecteris, non tẽpore uno, sed diversis alio renascente, alio decedente, ut unusquisque ex industria jucunditate te te afficere sataget: Rami fructibus onerati pondere incurvantur, ac se infra decumbenti offerunt.

Affpice curvatos Pomorum pondere ramos:

Ut sua quod peperit vix ferat Arbor onus.

"O quam dulcissimum est fructus ex Arboribus quas sevisi, inseruisti, & coluisti, propriis manibus colligere, & Amicis, agnatisque jactabundus largiri. Est & alia in Arboribus delectatio, Avium scilicet modulatio, ac ex variorum multitudine dulcissimus efficitur concentus: Auresque cantibus demulcent suis: *Aves canoros garrule fundunt sonos: Et semper Aures cantibus mulcent suis.*

"Theophrastus Hortum juxta ædes collocavit, quem moriens testamento Philosophantibus reliquit: Democritus Abderites prope hortum Cellam habuit. Palemon Atheniensis in hortis docebat Laidis Cyrenæi in hortis schola fuit, quos Attalus Rex ædificavit. Quid enim hoc opere innocentibus vacantibus, & quid plenius magna consideratione prudentibus; quid majus mirabiliusque spectaculum est, quam cum positis seminibus, Plantatis furculis, translatis Arbusculis, insitis malleolis, tanquam interrogatur quæque (vis radice & germine) quid possit, quidve non possit, unde possit, unde non possit, cum rerum natura humana ratio quodammodo loqui potest quid in ea valeat numerorum invisibilis interiorque potentia: quid extrinsecus adhibita diligentia, & in ipsa consideratione perspicere: quia neque qui plâtat est aliquid neque qui rigat, sed Deus qui dat incrementum. Mira est & inexplicabilis horti commoditas: nam si necessitatem considero Agriculturæ tanto est humano generi emolumento; ut eâ carere nullo modo possis; si utilitatem, inter primas non potestrema, aut quænam illi poterit comparari: si voluptatem dignitati commistam, ea est excellentia &c.

Much more they speake in praise of this worke, which here (for brevities sake) I shall omit.

Now that the husbandman (and every one) may understand what has been said by these Authors, and others, I will give more plainly the summe of all.

They

August.

Reges & Imperatores summos; Magistratus non solum Hortensia colere, propriis manibus.

They define husbandry to be an Art. teaching men lawfull u-
 sury with the earth, And that it seemes chiefly to be the searching
 , and finding out the nature of Plants and Trees, and of
 the Heavens and the Earth, and then to give unto Plants fit
 place and ordering; according to the nature of the Soyle and
 Climate; And, (as they say) to marrie and match together
 Heaven, and earth, or to procure a society, and neere fellow-
 ship between heaven and earth, for the increase and benefit of
 Trees and Plants: But seeing that the heavens can by no means
 be bowed, or brought neerer to us, therefore it must be the
 skill, and diligence of the husbandman to place and set his
 Trees in such sort that the heavens may give their influence and
 warmth, for encrease and refreshing of them: Husbandmen-
 ought to make Accompt of two harvests yearly, the one of
 Profit the other of Pleasure, for when a man hath done what
 is necessary for his life, and thence proceeds profit; besides all
 that, great Pleasure springs from that Profit: and what greater
 pleasure can there be then that which is Accompanied with
 Profit. Now of all estates of life the husbandman may chiefly
 challenge this to himselfe, yea it is questionable whether the
 Profit or Pleasure of his life be the greater: God when he
 would make the life of man Pleasant unto him, he put him in-
 to an Orchard or Garden of delights, that he might labour
 therein with pleasure of mind: There a man is delighted with
 variety of Fruits of Trees, not in one season only, but in di-
 verse seasons of the yeare, some young and springing forth
 while diverse other kinds are ready to fall with ripenesse. So
 that a man doth even busy himselfe with the choice of such va-
 rieties. The Boughs burthened with the weight of Fruits, do
 bow to thee, and in a lowly manner offer their Fruits as
 the Poet notes.

Behold the bending Boughes, with store of Fruits
 they teare.

And what they have brought forth, (for weight)
 they scarce can beare.

Oh how sweet and pleasant is the fruit of those Trees which
 a man hath Planted and ordered with his own hand, to gather
 it, and largely, and freely to bestow, and distribute it among his
 kindred and freinds.

Yea

Yea it is a delight to heare the pleasant tunes, and singing of Birds which with their variety of notes, make a sweet harmony and concert, and much please and allure the sence. So the Poet,

Melodious Ditties chirping Birds indite.

Whose pleasant songs, our ravisht eares invite.

Theophrastus planted an Orchard close to his dwelling house, which when he died he left to students and lovers of Philosophy and wisdom. Democritus, had his Chamber neere to a garden. Many Philosophers have taught their schollers in Orchards and Gardens.

What worke is more innocent then Planting of Fruit-trees, and Augustine, what more full of high speculations to wise men then it is: What is more wonderfull to behold then (in sowing seeds, in planting sprigs, in removing young Trees, in grafting new shoots or grafis) as it were to aske and demand With a mans selfe what by the nature and virtue of the Roots and branches may be done, or what may not be done, for what reason it may be done, or not done (seeing the nature of things may after a sort be declared by reason) what of many things is of force, and effect, by an invisible and inward power, and nature, what diligence is outwardly to be used, &c. In which consideration and search, we may see and understand these things. Yet for all that, neither he that Plants is any thing, nor he that waters, but God that gives the increase.

They accompt this course of life free from many mischeifes, and vexations, that necessarily attend other affaires: great and many cares, and troubles are found in honours, and high places, but this course of life, about Orchards and Gardens, is full of sweet rest, honest businesse, and modest pleasures, which many famous and learned men have had recourse unto for refreshment after study and other labours: It is full of honest profit and gaine, and brings and administers all necessaries, here a man enjoys pleasant quietnesse and tranquillity of minde, which is seldome attained by those that follow State-Employments: This is worthy the exercise of wise men, of good men, of learned men, of Kings and Emperours: they have taken great delight in the study and practise of these things: This course of life is farre off from covetousnesse, and even tyed and married to all Offices of love, and friendship: This is a quiet and pleasant life, worthy to be preferred before all honours and dignities: This culture of the ground, and planting and ordering of Fruit-trees, Occasions search and inquiry into many secrets profitable to men, which brings unto them ample satisfaction.

fallion yea the excellency and worthinesse of Husbandry is surpassing, it excells all other Arts, and appears as the Lady or Mistresse, they as Servants attending her. Many of the Ancients have largely declared to us the nature, and use of Plants and Trees before all other living creatures. The profit of a Garden of Fruit-trees is wonderfull, and cannot well be declared. And if Antiquity can adde any noblenesse and worth to a thing, what imployment then before this, what more ancient then the labour of the Husbandman, Husbandmen are called Honest and good men, because of their innocent and just life. Cicero esteemed it best of all other labours, nothing more rich and profitable, nothing more delightfull, nothing more worthe a generous spirit then it: In former times those that were honoured and carried in triumph, they were not honoured with Gold, Pearles, or other such pretious things, but With the Boughs and Branches of Trees, And in their Games and exercises, Who so got the Prize were crowned with Branches of certaine Trees, as the Olive, Palme, &c. Such as got the Conquest and victory of their enemies were crowned with the Lawrell, which was to them a signe of Victorie. And in their feasts they gave Crownes and Garlands of Leaves, and Branches of trees in token of mirth and pleasure: Besides, if this labour receive honour from the persons that have been conversant in it, then it is a kingly Art, and chiefeft of all other, Cyrus King of Persia (who had all the Kingdomes of the earth given to him) was diligent and most exact in the handling of it: He planted Orchards & Gardens of Fruittrees with his owne hand, which when Lysander saw, he admired to see the excellent and singular order, and disposition of them: saying, O Cyrus, right blessed shall all men call thee, because to thy dignity, and Crowne thou hast joyned this care, and course of life.

Telephanes tilled the ground and planted Trees among his subjects. Elizeus Spartanus planted spacious and large Orchards, and used therein to feast and Banquet with his children and friends. Kings, Emperours, and highest powers were not asbamed to perform the workes belonging to an Orchard with their own hands: Divers Emperours of Rome had Gardens of Fruit-trees, and performed the works therein with delight: Dioclesian Emperour of Rome after he had reigned Twenty yeares, betooke himselfe to a privatelife and Planted Orchards and Gardens with his own hand, wherein he tooke such delight that he could not be intreated to take upon him againe the Government of the Empire: Solomon (the wisest of all Kings)

had

See the worthe
Acts of Cyrus
King of Persia.
Ezra 1. 1, 2, 3.
&c.

Of this, See Sir
Rich: Barkley of
the felicity of
man, pag. 162.

had Orchards and Gardens of Fruit-trees, and tooke pleasure in them, and spake of all Trees from the Cedar even to the Shrub.

Mascall sets out this Art with admirable praises, he saies among all sciences, and goodly exercises for men, there is none doe more refresh the spirits, nor cause more admiration in the effects of Nature, or is more profitable for mans life then is the skill of Planting and Grafting. Many great Lords and Noble Personages have left their Theaters, and goodly exercises, and have given themselves to Planting and Grafting, and such like imployments, and have commended nothing more then this imployment. The Senators, Dictators, and Consuls of the Romans have commended Planting and Grafting to be one of the most flourishing labours in the world for the Common wealth. Yea they did so much esteeme it, that they did hang Tables thereof in divers places, never thinking the time more aptly spent then in Planting and Grafting. Many worthy and learned men both ancient and of late daies have written for their Country and Commonwealth of the fruitfull Art of Grafting and Planting.

M. Bolton saies, Vineyards, Orchards, Gardens, & such inclosed Plats, are (as it were) the Flowers, Starres, & Paradises of the Earth.

And the Lord Bacon (in his *Essaies* pag. 266.) saies Gardens are the purest of humane pleasures, the greatest refreshments of the spirits of man: without which Buildings and Pallaces are but grosse handiworks.

Thus have I shewed (briefly) what some of the *Ancients*, and some late writers have said, and esteemed of *Fruit-trees*, and of the *Husbandmans* course of life, and imployments about them.

I will now say something more of the dignity and value of *Fruit-trees*, and of the *Art of Planting* from *Divine* and *humane Arguments* and *Testimonies*, and after that I shall enter upon the worke it selfe.

Though it be absurd for a man to commend himselfe, yet he may commend his *Calling*, and *profession*: *Paul* would not boast of himselfe, yet saith he *Rom. 11. 13.* *I magnifie myne Office.* Suffer me therefore (for *Encouragment* to all in the worke,) to say something in praise of *Fruit-trees*, and of the imployment about them, it being a worke so full of *Profits* and *Pleasures* in the life of man: The works of God are laudable, & have a Dignity upon them, & ought to be taken notice of, praised, & admired, not for themselves, but for the *Author*, that he through, & by them, may have the more praise. *Psal. 111. 3.* *His worke is worthy to be praised, and had in honour.*

Arguments of the dignity of Fruit-trees
and Art of Planting.

¹
Argument: **O**NE Divine Argument of the dignitie, and value of Plants, Fruit-trees, and the Art of Planting may be this.

It was Adams employment in his innocency to keepe, and order the Garden of Fruit-trees, Gen. 2. 15. And the Lord God put him into the Garden of Eden to dresse it, and to keep it.

God, who is wisdom it selfe, saw that a Garden of Fruit-trees was the meetest place upon all the Earth, for Adam to dwell in, even in his state of perfection: And therein assigned him an employment for his greater delight, and pleasure: so that this employment, as it is ancient, so it is honourable.

De Gen. ad Lit.
Li. 8.

Augustin is of opinion, that this dressing of the Garden, was as well an exercise of the hand, as of the mind, not with toylefomnesse & trouble, but with delight, & pleasure. *Non erat laboris affectio, sed exultatio voluntatis, quum ea qua Deus creaverat, humani operis adiutorio, Latus, feraciusq; provenirent, unde Creator ipse uberius laudaretur.* That things created in the Garden, by his labour, might be made more fruitfull, and God thereby have the more glory.

The second Divine Argument is this.

²
Argument: Plants were the first animate bodies that God created: And fruits of Trees were the first food that was given to man, and for ought we read, the only food he then had.

And God said, behold I have given you every herb bearing seed, which is upon the face of all the Earth, and every Tree in which is the fruit of a Tree yeelding seed, so you it shall be for meat, Gen. 1. 29.

³
Argument.

Another Divine Argument is from examples in Scripture of Planting Fruit-trees, and of the use of Orchards and Gardens.

Example. First: God (blessed for ever) planted an Orchard, or Garden of Fruit-trees, Gen. 2. 8. And the Lord God planted a garden, Eastward in Eden, and there he put the man whom he had formed.
Diodor. exp. Sir W. Rawley hist. part. 1 Ch. 3 Aug. de Civit. Dei 1. 13. c. 24
God planted a fruit garden; That is, as good Authors agree, He caused a parcell of ground to bring forth Plants and Trees most exquisite.

quisite and usefull for man, and enriched that place with more fruitfulness and beauty, then any other part of the Earth, and called it **E D E N**, that is, a place of Pleasures.

And at this day, this Region of Eden (afterwards called *Mesopotamia*) is exceeding fruitfull, being in the best Climate 35 degrees from the Equinoctiall, and 55. from the North-pole, in which Climate the most excellent fruits, Oyles, Graines, &c. are found.

Secondly, we have for our Example herein that good, and holy man who found grace in the sight of God, when all the world (save a few with him) perisht *Gen. 9. 20.* And Noah began to bee an husbandman, and he planted a Vineyard, Or as some conceive, he began to prune and dresse the plants that were set before the Flood, and to order them that they might yeeld their fruits.

Thirdly, We have for our example herein the friend of God, faithfull Abraham *Gen. 21. 33.* And Abraham planted a Grove in *Beerseba*; and called there on the name of the Lord, the everlasting God.

Of the fitnessse of these shades by Arbours, Seats, & close walks, in Orchards for contemplation, and private exercises, I shall speak hereafter.

Fourthly, King *Uzziah* delighted in this imployment *2. Chro. 26. 10.* *Uzziah* had husbandmen and dressers of Vines in the Mountaines and in *Carmell*, for he loved husbandry.

This King raigned a long time in *Ierusalem* over *Juda*, fifty and two yeares.

Fifthly, King *Solomon*, a great, and wise King *Eccles. 2. 4.* tooke pleasure herein, (and though we may not follow him in any immoderation, and excesse, yet there is a lawfull, and warrantable use of these delights *Verf. 4. 5.* *I made me great workes, I builded me houses, I planted me Vineyards, I made me gardens, and Orchards, and I planted in them Trees of all kind of fruits.*

Sixtly, For the use of an Orchard and Garden, we have the example of the Mirror of Chastity, Virtuons *Susanna*. It was her custome to work in a garden, as we see in the History *verf. 7. 8.* *Susanna* went into her husbands garden to walke, the two Elders saw her going in every day, and walking.

Seaventhly, The people of *Israel* (by a speciall command from God) made use of Arbours and shady places, in their great Feasts: *Nehem: 3. 14. 15.* It was published and proclaimed in all their cities,

and in Jerusalem saying, *Goe forth unto the Mount and fetch Olive Branches and Pine Branches and Mirtle branches, and Branches of thick-Trees, to make Bootheres, So they made these Bootheres upon the Rooffes of their houses, and in their Courts, and in the Court of the house of God, and in the streets; and they sate under these Bootheres and there was very great gladnesse.*

8

Example.

Eightly, For the use of an Orchard, or Garden, we have the example of our blessed Saviour, whose custome it was to walke in a Garden, Jo. 18. 1. *When Jesus had spoken these words he went over the Brooke Cedron Where was a Garden, into which he entred with his disciples, We see he often came to this Garden, for Judas observed it was his custome to goe to it. v. 2. Judas knew the place, for Jesus often times resorted thither With his disciples.*

4

Argument.

Another Divine Argument of the Dignity, and value of Fruit-trees, and art of Planting, is from the frequent use of Similitudes betweene the Church of God and Fruit-trees, and betweene our Saviour and Fruit-trees.

Fruit-trees beare the figure and resemblance of many high and great Mysteries held forth to us in Parables, Tropes, Allegories, which represent Morall, and Spirituall things. under the shape & figure of these corporeall things.

1

Similitude

One Similitude is betweene the Church and a Vineyard: Esay. 5. 1. 2. *My beloved had a Vineyard in a very fruitfull Hill. vers. 2. And he fenced it, and gathered out the stones thereof and planted it with the choice Vine &c: And he looked that it should bring forth grapes &c.*

2

Similitude

Secondly, the Prophet David useth the Similitude of a fruitfull tree to expresse the Condition of a Godly man. Psal: 1. 3. *He shall be like a Tree planted by the Rivers of Waters, that bringeth forth his fruit in due season, his Lease also shall not wither and looke whatsoever he doth it shall prosper. So againe Jer: 17. 8. He shall be as a Tree planted by the waters, and that spreadeth out her Roots by the River, and shall not see when Heate commeth, but her Lease shall be greene, and shall not be carefull in the yeare of Drought neither shall cease from yeelding fruit.*

3

Similitude

Another Similitude our Saviour useth to expresse the Condition of his Church drawne from the Vine. Jo. 15. 1. *I am the true Vine and my Father is the husbandman: every branch in me that beareth not fruit he taketh away, and every branch that*

that beareth fruit he purgeth it, that it may bring forth more fruit, as the Branch cannot beare fruit of it selfe except it abide in the Vine, no more can yee except yee abide in me, Verſ 4.

Another Similitude is between Naturall and Myſticall Graſ-⁴
ting, Rom: 11. 17. Concerning the calling of the Gentiles, and re-^{Similitude.}
jection of the Jewes for a time. If ſome of the Branches be broken
off, and thou being a Wild Olive tree were graſted in amongſt them, &
with them partakeſt of the root and fatneſſe of the Olive tree, Ver. 23.
And they alſo if they abide not ſtill in unbeliefe ſhall be graſted in, for
God is able to graſt them in againe, Verſ 24. For if thou wert cut out
of the Olive tree, Which is wild by nature, and wert graſted (contrary
to nature) into a good Olive tree, how much more ſhall theſe Which bee
the naturall branches be graſted into their own Olive tree.

Fiftly, The condition of the Church is figuratively & by Alle-⁵
gories deſcribed by Solomon in his Songs, Chap. 4 12. 13. And a-^{Similitude.}
mongſt other figures and reſemblances there uſ'd, one is taken
from an Orchard or Garden of Fruit-trees. A garden incloſed is my
ſiſter, my ſpouſe. Thy Plants are an orchard of Pomegranates, with
pleaſant fruits. And againe, the Church compares Chriſt to a fruit-
tree, Ch. 2. 3. Like the Apple-tree among the trees of the wood, ſo is
my beloved among the ſonnes: I ſate downe under his ſhadow with
great delight, and his fruit was ſweet to my taſt.

Sixtly, A Fruit-tree beares the figure and reſemblance of our⁶
Saviour Chriſt in the deſcription of Spirituall Paradice Revel. 22^{Similitude.}
2. In the miſt of the ſtreet of it, and of either ſide of the River was
there the tree of life, which bore twelve manner of fruits, and yeelded
her fruits every month, and the Leaves of the Tree were for the hea-
ling of the Nations. And againe Chap. 2. 7. To him that over-
commeth I will give to eat of the tree of life, which is in the miſt
of the Paradice of God.

Concerning

5
Argument,

Concerning Similitudes between *Materiall* and
Mysticall Fruits, see the *Observations*.

Another *Divine Argument* may be this.

God hath threatned to withhold his blessing in these things, if we doe not obey him, and hath in displeasure often deprived men of the same for their disobedience, which proves them to be of value and worth: for when God is displeased with a people, or particular persons, and will shew it by some correction, that hee may bring them to repentance, he doth it not by withholding, or taking from them some small matters, that they can easily spare without griefe or trouble, for that would worke no effect, but by withholding or depriving them of something that's precious, and deare to them, the want, or losse of which, will sad the heart: which course God hath observed with people, concerning these particular blessings. As appeares.

1 This was part of two of the *tenne Plagues*, wherewith *Egypt* was punished, *Exod.* 9. 55. *The haile brake every tree of the field.* And as the *Prophet David* hath it, *Pl.* 78. 48. *He destroyed their Vines with haile, and their Mulberry trees with frost: and Psal.* 105. 33. *He smote their Vines also, and Fig-trees: and Ex.* 10. 5. *Locusts did eat all the Fruit of the trees which the haile had left.*

2 Secondly, Among the *signes of Gods displeasure* against *Israell*: this is one, *Amos* 4. 9. *I have smitten your Fruit-trees, &c. yet have you not returned unto me, saith the Lord.*

3 Thirdly: The *Prophet* calls to mourning, *Joel* 1. 12. *For, The Vine is dried up, the Fig-tree languisheth, the Pomegranate tree, the Palme tree also, and the Apple tree, even all the trees of the field are withered, because joy is withered from among the sonnes of men.*

4 Fourthly: God in displeasure for sin tells them, *Deut.* 28. 39. 4. *Thou shalt plant Vineyards and dresse them, but shalt neither drink of the wine, nor gather the grapes for the wormes shall eat them. Thou shalt have Olive trees throughout all thy coasts, but shalt not anoint thy selfe with Oyle: for thine Olive shall cast her fruit: And God bids, Moses tell the people, if they would not obey, their land should not yeeld their increase, neither should the trees of the land yeeld their fruits. The like againe, Zeph.* 1. 13. *Amos* 5. 11. *Esay*, 17. 10. *Hosea*, 2. 12.

6
Argument.

Another *Divine Argument* may be this.

God hath promised these things as blessings to such as obey him, & from time to time performed it: Not to be look't upon as things of light, and triviall consequence, but to be considered as strong engagements to obedience. When God hath bene well pleased with a Nation, or particular persons he hath often shewed it (among other tokens of his love) by multiplying the fruits of their trees, encouraging them to plant Fruit-gardens, and promising his blessing thereon. As we see.

1 God (by his Prophet) encourages his people in *Babylon* to build, and to plant, *Jer: 29. 5. Build yee houses, and dwell in them, and plant gardens and eat the fruits of them.*

2 And in the promise of their returne, this was one of the blessings God would bestow on them, *Amos, 9. 14. And I will bring againe the captivity of my people Israell, and they shall build the wast cities and inhabite them, and they shall plant Vineyards, and drinke the wine thereof, they shall also make gardens and eat the fruit of them.*

3 Thirdly, When they came into *Canaan* that pleasant land, this is mentioned as one of the blessings, *Neh: 9. 25. They possessed houses full of all goods, wells digged, Vineyards and Oliveyards, and fruit-trees in abundance.*

4 And among the showers of blessings (as the Prophet calls them) this is one, *Ezek: 34. 27. The tree of the field shall yeeld her fruit. And Ezek: 36. 29. I will multiply the fruit of the Tree.* The like of many other places, *Mal: 3. 10. 11. Joel. 2. 21. 22. Levit: 26. 3. 4. Esay 65. 21. 22. Levit. 19. 23. &c.*

And thus much of the sixth Divine Argument from the promises of God, and performance of them, in these things to his people.

Another Divine Argument of the Dignitie and value of Fruit-trees, and the art of planting, is from two generall commands given by the Apostle Paul, which though they mention not these things in explicite and plaine tearmes, yet they are commended to us by plaine and cleare implication, and deduction: for as out of generall promises we may draw, and deduct particulars, and make applications from them; So also from generall commands and directions.

The first Command is that of Paul in his Epistle to *Titus* Ch. 3. 14. Let ours also learne to maintaine good workes for necessary uses, that they be not unfruitfull: here's a generall Command, out of which one particular may be derived for the present purpose.

The Apostle here, by *Good Workes*, meanes good works as they are towards the maintenance of the *Commonwealth*, or a particular *Family* with necessary commodities and usefull things, as *Honest Traders*, and *impleymnts*, as the Margent renders it.

Now it is cleare, *this worke and imployment of Planting Fruit-trees*, is a good worke for necessary uses, seeing the life of man may by it be maintained with so many necessities belonging to it: See *Profits of an Orchard*,

This being so, the *Apostle* (then) bids us *learne to doe it*, as if he should say, get some skill in it, and be doing, then uphold & maintaine it.

The second generall Command is that which the *Apostle* writes to the *Philippians*, Chap. 4. 8 *whatsoever things are True: whatsoever things are Honest: whatsoever things are Just: whatsoever things are Pure: whatsoever things are Lovely: whatsoever things are of Good Report: if there be any Vertue, if there be any Praise, thinke on these things.*

Now it is easily for a man to speake of many particular *Imployments*, which have upon them the *Characters* and *Marks* here mentioned: but of all of them, I know not one (except *Divine Imployments*) that hath these *Marks* so clearely stamp upon it, as this *Imployment* of the husbandman in *Planting Fruit-trees*. This *impleyment* answers exactly to the *Apostles Rule*, as it were face answering face in the glasse: for what particular labour is more *honest*, more *iust*, more *pure*: more *lovely*: of better *Report*: what hath more *Vertue*, vvhath hath more *Praise* then it: See vvhath hath been said in the *Praise* and good report of it; and the rest of the *Properties*, at large: already mentioned.

Now this being so, then we ought to follow the *Apostles Command*: If there be any *Vertue*, if there be any *Praise* (saith he) *thinke on these things*. The words are very *Emphaticall*: *whatsoever*, and if there be any *praise*. His meaning is, whatsoever the vvorke be, though mean in the eye of the vvorlde, yet, if there be but any one of these *Characters* and *Marks* upon it, it is vvorthy to be followed, then how much more vvhhen it has them *All*, & that so eminently, as that every eye sees them. *Thinke on these things*, saith he, first, to search out vvhath *works* and *impleymnts* are markt vvvith these *Characters*: and then, *thinke on such* to like, and chuse them, to set about them, to follow them, and make such things

things our professions for the praise of God, and profit of men.

And so much for the seventh *Divine Argument*.

Another *divine Argument*, is from Gods command for the preservation of fruit-trees: He layes a speciall charge upon men for their safety and preservation, as vve see, Deut: 20. 19 20. *When thou shalt besiege a city, long time in making war against it, to take it, thou shalt not destroy the trees thereof, by forcing an Axe against them, for thou maist eat of them, and thou shalt not cut them downe, to further thee in the siege, for the tree of the field is mans life, Vers: 20. Onely the trees which thou knowest that they be not trees for meat, thou shalt destroy, and cut them downe, and thou shalt build Bulwarks against the city that maketh war with thee untill it be subdued.* Although this Scripture may be taken in an *Allegoricall sence*, as signifying to us Gods care of *Myslicall Fruit-trees*, his people: being *Trees of righteonsnesse of the Lords planting*: yet the same may also bee taken in a *litterall sence*, and as som godly men conceive, is a positive binding Law even at this day.

We see God ingeminates, & repeats his charge to preserve the *Fruit-trees*, being trees for food, and nourishment of mans life, they must not be destroyed, though it were on so great an occasion as to further the siege against their enemies. He leaves other trees, such as are not trees for meat, such as beare no fruits, to be cut down and destroyed, as they have use for them in the war, but they must not spoyle, nor meddle with the *Fruit-trees*.

I have discovered these *Divine Arguments of the dignity, and value of fruit-trees, and the art of planting*, to stir up, & encourage men to so good a work, to a work of so great, and many advantages to the Commonwealth.

And because *Humane Arguments*, are likewise prevalent with men, observe them also for further encouragement.

The first *Humane Argument of the dignity and value of Fruit-trees, and the art of planting* is from *Presidents, or Examples of wise and learned men, of great and good men in former ages, who have practised this Art.* I. Humane Argument.

Examples either in Virtue or Vice, are powerfull with men, (especially Examples of great ones)

Brevius iter per exempla, quàm per precepta.

Its much easier to prevaile with people by *Examples*, then by *Precepts, or Rules.* And if *Examples of great ones*, even in things

evill, are so powerfull, as they are with most men, how much more then should they be prevalent in *honest, & vertuous things*: so that herein is a double inducement, the *Example*, and the *Vertue*: here is a twofold Argument concurrent and met in this imployment of *planting fruit-trees*: *Presidents*, and those of the highest; *Philosophers, Kings, and Emperours*. Secondly, *Vertue*, & that of the chiefeft Nature that secular Imployments have in them.

So then observe some *Examples* recorded by ancient Authors in this imployment of *planting Fruit-trees*.

Pog. Florent.

Plures excellentis doctrina viri, & Philosophandi studio, &c. Many famous and learned men (saith he) studious in Philosophy, have delighted in this course of life, and found therein abundance of pleasure, and contentment.

Joan. Bap. Port.

Si dignitas Agricultura accedit ex iis qui eam tractaverint Regalis Ars & dignissima erit. If the dignity and esteeme of this Art may be drawne from those who have been conversant in it, then it is a Kingly Art, and chiefeft of all others

Reges & Imperatores summosq; Magistratus, &c.

Cyrus King of Persia.

Philometrus

Heronus

Archelaus

Attalus

Evax and Avicen:

Kings of Arabia.

Solomon King of Israel

Telaphanus.

Antonius Pius.

Elizeus.

Numa.

Sportanus.

Alcinous.

Mithridates the great.

Alexander the great.

Dioclesian, Emperour of Rome,

And many others.

Kings, Princes, Roman Emperours and the highest powers on earth, have not disdained to performe the works of an Orchard with their own hands, and taken delight therein.

Mascall saies: Many great Lords and Noble personages, have left their Theaters, and goodly exercises, and have given themselves to Planting and Grafting, and have accounted nothing of higher commendation.

The

The second *Humane Argument* of the dignity & value of *Fruit-trees and the art of planting*, is from the praises of ancient and late *Writers, and the suffrage, or generall consent of all people*. 2. *Humane Argument.*

Works & employments that have the *praise* but of some persons only, we cannot conclude the worth and dignity thereof from such praises, because selfe and sinister ends may sway in the minds of such: but those employments that have the *Praise of all*, and where there is a concurrence, and consent of minds in all people in the praise thereof, (of the *Good*, as wel as the *bad*, of the *Learned* as well as the *unlearned*, of the *wise*, as well as the *unwise*) these probably are good and vertuous.

Now this *art and employment of planting Fruit-trees*, hath the joynt and unanimous consent, not only of the *greatest persons of the world*, but likewise of *all persons in the world*, ther's none hath ill will towards it, none hath any thing to say against it, but all, without exception, give it their good word and speake in the praise of it.

If men doe but speake of it, they'l commend it, and say, its a goodly employment, its both a pleasant and profitable worke, its good for a *Commonwealth*, it enriches whole *Countries*, to this purpose men usually speake of it: what ancient and late writers have said in the praise of it may be seen, pag. 8, 9, 10, &c.

And for the second *Humane Argument* thus much.

The third *Humane Argument* of the dignity and value of *Fruit* 3. *Humane Argument.*
trees and the art of planting is *Argumentum ab utili*, from the *Profits Argument*. that are receav'd thereby.

Let us see then what *Profits* may be had from an *Orchard* or *Garden of Fruit-trees*.

Profits arise from an *Orchard* many waies: one way is to a 1. In the mans *Estate*: and that in two respects: first, in respect of house-kee- Family. ping, and provision for his family all the year, e

Secondly in respect of sale.

Such as have good Orchards knowe by experience that they are very profitable for meat, and drink all the yeare-long, many good dishes they make of Fruits, and many wholsome and pleasant drinks, Syder, Perry, Cherry-Wines, &c. which are not barely nourishing but have other speciall properties, they moderately coole and refresh the spirits in heat of Sommer; and besides they keep the body from grosse and superfluous humours, and carry downe the seeds of diseases, which else would lodge and grow in the body, and at length spring out to the preiudice of health.

Of the healthfulnesse of these *Liquors*, See the use of Fruits.

2. For Sale.

Secondly, *Fruit-trees* are profitable to the Husbandman in respect of sale of the fruits, when a man has more then he can spend in his house, especially to such as live neare some great Towne or Citty, where they have vent at pleasure. The *Poet* saw the Profits of an Orchard when he said

*Non illi deorat, quod pauperis exigit usus,
Interdum locuples à paupere multa petebat.
The Orchard doth with fruit the poore supply,
With which he doth the wealthie gratify.*

The Profits of an Orchard once come to good perfection (doth exceed the profits of Corne (upon like quantity of ground) many times over. As hath been computed and set down by those that (I suppose) well knew the value of both. And touching Profits to the Estate thus much.

2. Profitable to the body.

Secondly, An Orchard or Garden of Fruit-trees, and Employments about the same, is profitable to the body, first in respect of health: secondly in respect of long life.

1. In respect of Health.

What is a greater earthly blessing then perfect health of body, some have said *valetudo est summum bonum*: Health is the chiefest earthly good thing: what will not men doe for health: they will set body and mind & all on work for health: they will part with friends, house and lands, silver and gold, and all for health.

Now health is preserved: first, by moderate and seasonable exercise, in the Orchard the labour that preserves health must not be too violent, it must be but *ad ruborem, non ad sudorem*, as some advise: to bring the body to a temperate and gentle heat, not to immoderate sweating.

The Lord Bacon adviseth to exercise causing rather perspiration then sweating, and saies further, that an idle life doth manifestly make the flesh soft and dissipable, but robust exercise, so it be without overmuch sweating, and wearinesse) maketh it hard and compact, which advanceth health.

Secondly, *Health* is preserved by *fresh & wholesome Ayres* which in heat of sommer is found in *Arbors, Seats, and Walks* in the garden of *Fruit-trees*. The aforesaid *Author* tells us the *ayre* in sommer is predatory and hurtfull through the heat of the sun, and therefore ought (as much as may be) to be excluded from the body. Now there is no *fresh wholesome ayres*, and coole shades to be found any where in sommer season, better then these in the Orchard, or garden of *Fruit-trees* so the Poet

*Opaca prebent arbores umbracula,
Prohibentq; densis fervidum solem comis.*

Green Canopies the shady trees us lend

Gainst scorching sun, boughs thick, whilst they extend.

Thirdly, *Health* is preserv'd, by pleasant and wholesome Odors, and perfumes found in the Garden of *Fruit-trees*, all the spring and sommer, by digging the Earth, and from the Leaves and blossomes of Trees:

Lo: Ba: tells us, the vapors of fresh earth by digging, condense and refresh the spirits.

And that Leaves of trees falling towards the middle of Autumne, yeild a good refreshing to the spirits.

But the most pleasant and wholesome Odors, are from the blossomes of all the *Fruit-trees*, which having in them a condensing and cooling property are therefore, not simply Healthfull, but are accompted Cordiall; chearing and refreshing the Heart and vitall spirits.

Now the spirits (as this *Author* observes) are the Master-workemen in the body, and as the uppermost Wheele which turneth about the other wheelles in the body, and therefore whatsoever is Healthfull and refreshing to the spirits, works (powerfully) good effects in the body: And that speedily and suddenly: as the *Author* saies Vapors and Affections worke compendiously upon the spirits.

Of the Healthfullnesse of Odors see more at Large, in the title Pleasure of the sense of smell in a Garden:

*Hist. Life, and
Death pag.
207 & 208.*

*Hist. Life, and
Death, pag.
183, & 410.*

*Hist. Life, and
Death, pag.
236.*

Fourthly,

Fourthly: *Health* is preserved by *wholsome meats and drinks* all the yeare from the *Garden of Fruit-trees*.

The spirits of the body in sommer stand in need of cooling & condensing, & what meats and drinks more proper for that purpose then *dishes and drinks of the fruits of an Orchard*. They are both *Alimentall* and *Physicall*: they cure diseases and preserve health: discharging the body of the beginnings, and seeds of many diseases.

2, In respect
of long life.

Secondly: *A Garden of Fruit-trees is profitable to the body in respect of Long life*.

How much have men valued *long life*, in all ages of the world, what strange courses have some taken to extend their life to a great length: some have liv'd in *Caves and Rocks*, and sequestred themselves from society with men, and betaken themselves to a strict *Monasticall* course, that they might stretch out their life, and be said to live.

Yea amongst *Christians* who though they desire to be dissolved and to be with Christ. Yet in some respects *long life* is to be accompted a blessing, and is set before us as an encouragement to obedience: as we see Deut. 32. 47. *The feare of the Lord is your life, and through this yee shall prolong your daies*. And Prov. 3. 1. 2. *My sonne keep my Commandements for length of daies, and long life shall they adde to thee*: the like in many other places. Now I say: *An Orchard or Garden of Fruit-trees is profitable to the body for Long life*: and that in severall respects.

Prov. 10. 27.
Prov. 9. 11.
Ps. 91. 16.

All these foure last mentioned meanes for *Health*, the same likewise conduce and are profitable to *long life*: wherein lies another part of their excellency and worth: for as the *Lord Bacon* observes: some things are profitable for an *healthfull life*, but are not good for *long life*, but all these conduce as well to *long life*, as to *health*: so that *Moderate exercise*, 2, *fresh Ayres*, 3, *pleasant Odors*, 4, *Wholsome meats and drinks*, (which are all had in an *Orchard or Garden of Fruit-trees*, are (allo) all profitable to *long life*.

Hist. L. D. pag.
179. & 180.

The foresaid Author saies: *The spirits are the master Workmen of all the effects in the body, and therefore in the intention of long life ought to be first placed*.

Hist. L. D. pag.
183. & 414.

So then: whatsoever worketh upon the spirits for their refreshing, and vigor, is profitable to *long life*.

The operation upon the spirits, and their waxing fresh and vigorous;

gorous, is the most ready, and compendious way to *Long life*.
Now an Orchard or Garden of Fruit-trees, and imployments therein,
worke upon the spirits for their refreshing two waies,

First by the *Organs of the Body*.

Secondly, by the *Affections of the Minde*.

Touching the first, *The operation upon the spirits through the Or-*
gans of the body, see at large in the pleasure of the five senses.

Concerning the operation upon the spirits by the *Affections of*
the minde, I shall here speake, and mention only three *Affections*
of the minde which worke powerfully upon the spirits, condu-
cing to long life.

One *Affection of the Minde* which works effectually upon the
spirits for *Long life* is *Hope*.

The Lord Bacon saies *Hope* is most beneficiall of all the *Af-*
fections, and doth much to the Prolongation of life: if it be not too
often frustrated, but entertaineth the fancy with an expectation of
good, therefore (saith he) they which fix and propound to themselves
something as the mark, and scope of their life, and continually, and by
degrees, goe forward in the same, are for the most part long-lived, &
Hope is as a Lease-joy which may be beaten out to a great extension
like gold.

Now the diligent Husbandman in this art of planting Fruit-
trees, has good and sure grounds for *Hope*, not only from many
Promises in the word, but likewise subordinate grounds from *Rea-*
son and Experience. This *Hope* is sown with the seeds of his
Fruits, and springs up with them, and so from yeare to yeare his
Hope growes and increaseth with his *Fruit-trees*: He laies be-
fore him, and considers what great *Profits and Pleasures* are com-
ming towards him, he sees by experience, what a plentiful harvest
of *Profits and Pleasures* others receive from *Orchards and*
Gardens of Fruit-trees, which are as fuel, or food to nourish and
feed *Hope*, and hold it in strength and vigor, and when he begins
to receive *Profits and Pleasures* from his *Fruit-trees*, these re-
fresh *Hope*, and make it grow from strength to strength with his
Fruit-trees, and thus from yeare to yeare *Hope* is continued and
increased, and all this while the spirits are refreshed, as *Hope*
is refreshed, and are kept thereby vigorous and strong, and in a
pleased temper and condition, and being the *Master-workmen* in
the body, or first wheel (as the Author saies) they worke upon

all the parts of the body, for Prolongation of life.

And so much concerning the operation upon the spirits by Hope.

2. Affection.
Joy.

Another Affection of the minde which in this employment works upon the spirits for long-life is Joy.

Hist L.D.
pag. 221.

The foresaid Author saies: That this Affection of Joy works so powerfully on the spirits, that some great Joyes coming suddenly, & unexpectedly, doe overmuch attenuate, and diffuse the spirits. But now ther's no danger of the suddennesse of Joy in these things, whereby to raise and overmuch diffuse the spirits, for such things as cause joy in the employment of planting Fruit trees, are expected and waited for, and Hope prepares the way for Joy. Joy is a cleare shining beautifull affection, and rises some degrees higher then Hope: Joy in the use of earthly things is lawfull in its season ther's a time to rejoyce, as well as a time to morne. And there is a lawfull joy in harvest, in gathering in the fruits of the Earth, Esay 9.3. It is commanded and allowed of God: Deut. 12.16. Thou shalt rejoyce before the Lord thy God in all that thou puttest thine hand unto. And againe, Deut. 16.15. Because the Lord thy God shall blesse thee in all thy increase, and in all the workes of thine hands, therefore thou shalt surely rejoyce. A Christian may rejoyce in the Lord, in the use of earthly blessings. And in this employment of Planting Fruit-trees there are many grounds and occasions of rejoycing: The joy of the Husbandman is not a flash and so away, but it is a settled and habituall joy: and is renewed from time to time, which is the very thing the aforesaid Author speaks of, in giving instructions concerning Long-life. This life (saies he) (as much as may be) is so to be ordered that it may have many renovations, and the spirit by continuall conversing in the same actions, may not waxe dull. And againe. One thing above all is gratefull to the spirits, that there be a continuall progresse to the more benigne, and no doubt (saith he) it furthereth Long life, to have all things from our youth to our elder age, mend, and grow to the better.

Now this employment of Planting Fruit-trees is above all humane arts, most futable to these Rules: whereby this Affection of joy is kept fresh and vigorous, which also keepes the spirits cheerefull and lively: for herein are many renovations, and a continuall progresse to the more benigne, and things mending and growing to the better. Joy is continually renewed from yeare to yeare, yea, in divers seasons of the yeare, there are fresh and new joyes.

In

Hist. L.D.
pag. 228

Pag. 232

Pag. 164.

In the *spring* of the yeare joy springs afresh in beholding the *seeds*, and young *Grafts* and *Plants* spring forth vigorously and strongly. And the *buds* and *blossomes* breathing forth pretious & pleasant *Odors*, *rejoyce* and *delight* the inward and outward senses, promising a plentiful Harvest of *Fruits* in *Autumne*, and all the Sommer long joy is cherished, with coole fresh ayres, singing of *Birds*, sight of abundance of *Fruits*, bur'd'ning all the *Trees*, delighting the Eye with their beautifull formes & colours, & in *Autumne* joy is renewed againe with a rich and plentiful Harvest of *Fruits*. And all the Winter long joy is nourished and fed with a free use of all the *Fruits*, & *Wines*, & *Delicates* made of them. So here's a succession of *joyes*, one following on the neck of another, whereby the spirits are still kept in a cheerfull temper, and condition, and so work powerfully on the grosser parts of the body conducing to *Long-life*.

Concerning the lawfulness of rejoycing in earthly blessings, with a Caution: See afterwards.

Another Affection of the *Minde* which (in this employment) works powerfully upon the spirits for *Long life* is admiration.

The Lord Bacon saies: *Admiration* and light *Contemplation* are very powerfull to the Prolongation of life. This affection ascends a step higher then the other two, for as joy rises higher then *Hope*, so *Admiration* higher then joy.

It is our duty to *Admire* God in his works, which is a steppe higher then simply to praise him: when we look upon the works of a skilfull *Artificer* and commend it, it is for his credit, but when we admire, and wonder at it; this is a higher commendation. The holy *Prophet* would have us search out, & wonder at the works of God, *Ps. 111. 2. The works of the Lord are great, sought out of all them that have pleasure therein, Ver: 3. his work is honourable and glorious*, and he calls us to this duty of admiration: *O come hither and behold the works of God, how wonderfull he is in his doings! Ps. 111. 4. He hath so done his Marvellous workes that they ought to be had in remembrance.*

Now in this *Employment* of planting *Fruit-trees*, are many things to be seen, and understood to cause admiration, which works effectually upon the spirits for *Long-life*.

Baptist Port speaking of the wonderfull effects of *Grafting*, saies, it is an admirable Art, and the chiefeest part of the husbandmans worke.

3. Affection
Admiration.
Hist. L.D.
pag. 225.

Lib. de Cult. &
Institutione. Ch. 17

Artem infitionis admirabilem esse, ac totius Agricultura nobilissimam partem, voluptuosam, utilem, &c. When he considers the strange effects of Grafting, he falls a wondring, *O mira infitionis potestas, &c.* And Mizaldus speaking of grafting, saies; *Infitionis ope artificiosa, multa ad stuporem usq; miranda fieri:* many things may be done even to admiration.

Austin wonders at these things. *Quid majus mirabiliusq; speculaculum est, quam cum positis seminibus, plantatis surculis &c.* In exiguo grano mirabilior, praestantiorq; vis est &c. What more strange things are to be scene in Nature, then in sowing seeds, setting, & grafting young plants, and such like Works. In a small seed there is a wonderfull and admirable power and vertue,

Many strange things may be found in this imployment.

1 Will it not cause admiration to consider that a huge and mighty body, (the biggest of all bodies whatsoever that have life) does arise of a small kernell or seed, that that seed should containe in it (virtually, or potentially) a great Tree, with all the properties of it, and retaine its nature exactly in every particular.

2 Will it not cause Admiration to see goodly, wholesome, and beautifull fruits, come forth of rough, and crooked Trees, especially to observe the manner of their comming forth, the care that nature takes to secure and preserve the seed of the Fruit, with the Buds, Blossomes, Skin, & substance of the fruits, with the Core, Stones, or shells, and also with the leaves of the Trees.

3 Will it not cause Admiration, to consider that the nature, and properties of a great tree, are inclosed, and lye in every small twig, yea, in every Bud of the tree, even in the least Bud, yea in the Root of that least Bud, which Bud being set on a small Plant (according to Art) will grow to a Tree in all respects like to that whence it was taken.

4 Will it not cause Admiration to consider how many severall substances are made of one simple substance. for of the Sap of Trees is made the Barke, Wood, Pith, Leaves, Buds, Blossomes, Stalke, Fruit, and Seed.

5 Will it not cause Admiration to consider that Grafts or Buds, set upon Wild stocks, such as naturally bring forth sower, harsh, and naughty fruits. And though the Grafts and Buds, be nourished by that harsh and different sap, and receive all their substance, and growth from it, that yet these Grafts, and Buds should
retaine

retaine their own natures, and not be altered into the nature of the *stock* whereon they grow, but have power to digest, change, and assimilate this harsh, and ~~sower~~ sap into their own sweet & pleasant natures, and bring forth fruits accordingly.

Will it not cause *Admiration* to see little small Plants (of but two yeares old) and some but of one yeare, if grafted) to hang full of fruits, and to be able to beare them forth to their natural bignesse, and goodnesse, and notwithstanding make a large and sufficient grouth the same yeare. 6

Will it not cause *Admiration* to see the busie and industrious *Bees* to gather *Hony* even from the flowers, or blossomes of bitter *Almond-trees*, and other flowers and Plants that to our sence, are bitter, and unpleasant. 7

Will it not cause *Admiration* to see very many, and very great fruits hang upon only one small and slender twig. A great *An-* L.B.Hist.L.D.
shor notes it for a strange thing, that all the nourishment which pag.85.
produceth (sometimes) such great fruits, should be forced to passe through so narrow necks, as the stalk of the Fruit.

But may it not be accounted a more strange thing to see five or six, or more, faire and large fruits to hang upon a slender twig little bigger then the stalke of each particular fruit growing on it.

Will it not cause *Admiration* to see one Tree hang full of different, and severall kinds of fruits, as an *Apple-tree* withall, or many kinds of *Apples* or a *Cherry tree*, with all or many kinds of *Cherries* so of other kinds of trees. To see one tree hang full of fruits different in their *Formes*, *Colours*, *leaves*, & *Blossomes*, which may be done by *Grafting*, or *Inoculating*, so many severall kinds of *Buds*, or *Grafts* upon one tree. 9

VWill it not cause *Admiration* to stand upon a Mount in the midst of a faire large Orchard in the spring time, and to behold round about a multitude of severall sorts of Fruit-trees, full of beautifull *Blossomes*, different in their *shapes* and *colours*, ravishing the sence with their sweet *Odors*, and within a while, turned into faire and goodly fruits of divers *Colours* and *Kinds*, the fruit-trees gorgeously array'd with green leaves, and various colour'd fruits, and with so many pretious *Jewels*, and *Pearles*. 10

3. Profitable to the mind. And thus much touching the operation upon the spirits in order to *Long-life*, by these three *Affections*, *Hope*, *Joy*, *Admiration*. Thirdly: This *employment of planting Fruit-trees* is profitable to the minde. First in respect of *Knowledge*. Secondly in respect of *Affections*.

1. In knowledge. This worke is profitable to the *Minde* by storing it with variety of *Objects*, and profitable *Notions* both *Naturall*, *Morall*, and *Spiritual*.

How variously does Nature discover it selfe in *planting*, *grafting*, *budding*, *blossoming*, and *bearing Fruits*. So that such as are studious in the search of the *secrets of Nature*, may observe the *processe*, and *course* thereof in manifold respects about these things.

And multitudes of *Experiments* may be drawn out for *use* and *profit*. If men will but *joyne Contemplation*, and *Action*, *Sundry* and *Practise* together, they shall finde (even in this one Volume or book of the Orchard) many usefull and fruitfull *Lessons*, for temporall and spirituall advantage. See the observations.

2. In affections. And as the *employment is profitable to the minde* in respect of *Knowledge*: so also in respect of *Affections*, by offering manyfold *Divine Meditations*, by occasion whereof the *affections* of the soule may (with the help of the spirit) be raised and turned into a spirituall temper.

How fitly does the *Garden of Fruit-trees* offer unto us that most profitable and fruitfull *Meditation* of our first fall and originall sinne, whereof we were all guilty in such a Place; even in an Orchard or Garden of *Fruit-trees*: in which *Meditation* our *affections* should work to lay our selves low in our own eyes, to abhor our selves: and to exalt God, and abundantly to joy in the infinite and boundlesse mercy of God in Christ, in that he tooke pittie on poore *Man*, when he was fallen, but passed by the *Angels* when they were false, (*Creatures* by creation more excellent then *Man*) and left them in an irrecoverable state of misery. But in the same place, even so soon as we had sinned, promised us a *Saviour*, and when the fulnesse of time was come, sent him into the world. In consideration of these things, our *Affections of Love* to joy in, and *Admiration of God* should be enlarged, and boundlesse. O the height & depth of the *Mercy and Justice* of God, towards the *Angells Justice*, but towards us *Mercy*. What can we render unto

unto the Lord for this his infinite mercy? Now seeing he looks for nothing but *Love & Praise*, let us begin it here, that we may hold on to all eternity.

Fourthly: *Planting fruit-trees is profitable to the Name of the Planter. Fruit-trees are living, lasting monuments, & beare up, & to the name.* perpetuate the *Name* of him that planted, & labored about them both while he lives, and in generations after. A late Author saies, that *Apple-trees* and *Peare-trees* (and some other kinds of *Fruit-trees*) on good land, and duly ordered, will last 800 or 900 yeares.

What earthly thing is better then a good *Name*. Solomon tells us Eccl:7.1. *A good name is better then pretious oymments:* and againe, Prov:22.1. *A good name is to be chosen before great riches, and loving favour is above silver, and above gold:* One saies, *The best temper of mindes desire a good name, and the lighter, popularitie, and applause.* L.B Nat.Hist.
pag 258.

A good name is not only to be desired, but to be highly prised, and to be reckoned the chiefe of earthly blessings, not only for the beauty of it, but also for the permanency of it, it abides when friends, riches, life and all is lost.

One way to gaine, and keep a good name is by *Gifts and Benefits*: the worst temper of minds are wonne, and held by *Gifts and good turnes*, it's naturall to all creatures to love those that doe them good. Now who can so easily give so great, so many, and so acceptable gifts as the husbandman that yearely nurseth up multitudes of *Fruit-trees*, and hath store of pleasant fruits, wines, and delicates made of them. While he lives he bestowes young *fruit-trees, fruits*, and many acceptable gifts out of his *Orchard*, and being dead, his *Orchards, Gardens, and Fruit-trees* live, and flourish, and occasion a remembrance of his *Name*, for many ages after him.

And secondly, as *Gifts and good turnes*, gaine a good name, so also to be conversant and imployed about works for the *Publique and generall profit of a Commonwealth*: such works produce the same effect.

We know, all labours and imployments that bring both *Profit and Pleasure*, are approved and praised of all, though the advantage be but to a private family, how much more when they are for a *Commonwealth*.

And

And besides this *Morall Consideration*, God hath promised the great blessing of a *good name* to them that are conversant in good employments, Rom: 13. 3. *Doe that which is good, and thou shalt have praise of the same*, Rom: 2. 10. *Glory, honour, and peace, to every one that worketh good, upon the Jew first, and also on the Gentile.*

So then, the work of *Planting Fruit-trees* is profitable to the name of the Husbandman both while he lives, and in Generations after him.

5
Profitable to
others. Fifthly, An Orchard or Garden of Fruit-trees & the employment about them is profitable to others: First in the present times: Secondly in time to come.

This profit to others is by bestowing our fruits on friends, and neighbours, and such as want. For though God require not to himselfe (as formerly) *the first of all the fruits of all trees, yeare by yeare*, Nehem. 10. 35. Yet God requires yeare by yeare, when he bestowes all upon us, that we should give a part to himselfe againe, that is, to his poore members, that want them.

This is the way to obtaine a blessing upon all our labours. Deut. 15. 10. *Thou shalt surely give unto him (that is unto thy poore brother) and thine heart shall not be grieved when thou givest unto him, because that for this thing the Lord thy God shall blesse thee, in all thy works, and in all thou puttest thy hand unto.*

A Gift to the Poore is a gainefull Gift, for by it a man becomes Creditor to his Creator. Prov: 19. 17. *He that giveth to the poore lendeth to the Lord, and the Lord will recompence him.* Eccle: 35. 11. *The Lord recompenceth, and will give thee seaven-times as much.*

Likewise the fruits of an Orchard are profitable to others that buy the fruits, the Buyer having good and profitable Commodities for his money, has profit thereby, as well as the seller.

Yea, This labour is profitable to others in time to come, *Qui serunt Arbores alteri seculo profunt.* After ages receive much profit: also When our selves and others, have receiv'd our full portion of profit then fruit-trees are left to Children, and posterity to receive Profit many Generations after.

And this much touching the *Third Humane Argument*, from the Profits that are receiv'd from a Garden of Fruit-trees.

The fourth Humane Argument of the Dignity and value of Fruit-trees and the Art of Planting is Argumentum à voluptate, from the Pleasures that are receiv'd thereby.

4. Humane Argument.

Pleasure is called *sal & condimentum vite*. The salt that seasons all things to us. In all that a man has pleasure in it, is that which makes it acceptable. Pleasure (as one saies) is the Good of every thing, and a patterne of Heaven.

Now, we find pleasure in an Orchard or Garden of Fruit-trees sutable to all the Senses of the body. And here's a mixture of pleasures with profits: for divers objects of the senses are both pleasant and profitable: this employment is richly furnisht with both.

And as I have shew'd some particulars wherein profit consists: so likewise I will shew some particulars wherein pleasure consists in the use of a Garden of Fruit-trees.

Each sense hath its particular pleasure.

First for the sense of hearing.

It is a pleasure to the Ear to heare the sweet notes and tunes of singing Birds, whose company a man shall be sure to have in an Orchard, which is more pleasant there, then elsewhere, because of other concurrent pleasures there, a Consort of Musicke is more pleasant then upon a single Instrument. The Poet took notice of this pleasure,

1. Pleasure of the sense of Hearing.

*Aves Canoros garrula fundunt sonos,
Et semper Aures cantibus mulcent suis.*

Melodious ditties chirping Birds indite,
Whose pleasant songs, our ravisht eares invite.

And besides, something more this sense may receive from an Orchard (though it have least share of pleasure therein of any of the senses) by hearing the slow motion of Boughes and Leaves, by soft and gentle aires, sometimes (as it were) with a kind of singing or whistling noise, which will easily induce a sweet & pleasant sleep in sommer time (if a man be dispos'd) in some close coole Arbor, or shady seat.

2 *Pleasure of
the sense of
Touch.*

Secondly the sense of *Touch* may have *Pleasure* in an Orchard from the coole fruits, and leaves of Trees, smoothing and brushing the face therewith, which is refreshing and cooling in heat of Sommer. But *this sense* receaves *Pleasure* chiefly by the *shade of Trees* in sommer time. Coole refreshing Ayres are found in close *Walks, Seats, and Arbours* under and about the Trees, which keep off the burning heat of the sunne.

Hist L.D.
pag. 241.

Yea, they doe not simply keep off the heat of the sunne, but likewise much coole the ayre by its contact of these coole bodies, *Trees, Fruits, & leaves*; coole fresh ayres in heat of sommer are sought for, & are not only *Pleasant* but exceeding *profitable*, and healthfull to the body. Here *Profit* and *Pleasure* meet and imbrace each other. And hereto agrees the *L. Bacon*, who saies, exclusion of ayre is profitable to *Long-life*: for ayre is predatory to long-life through the heat of the sunne, and ought (as much, as is possible) to be excluded from the body. Now what better place is there, to exclude the heat of the sunne from the body in sommer season, then amongst the *shady trees, Arbours and Walkes* in the Orchard?

L.B. Hist.
L.D. pag. Ca. 11
Pag. 425,

It's laid for a ground, That condensing the spirits in their substance is available to long-life, which (he tells us) is done most effectually by coole ayres. Refrigeration or cooling of the body from without is above all things necessary to long-life.

So then; the *Pleasure* this sense receives from a Garden of Fruit-trees is to be much esteem'd.

3. *Pleasure of
the sight.*

Nat. hist. p. 224

Thirdly. The sense of *sight*, partakes of *Pleasure* in an Orchard, in beholding the exact Order in Planting of the Trees, their decent formes, the well compos'd *Allies, Walks, Seats, and Arbours* therein: for order and curious formes of things much delight the *sight*: of this see *L. Bacon* at large.

Likewise, the *sight* is delighted with pleasant and delicate Colours of the *Leaves, Blossomes, and Fruits*, that shew themselves in great variety, Curious Colours, especially the Colour *greene* is accounted helpfull to the *sight*.

Fons, speculum, Gramen, Oculis sunt alter viamens

Greene grasse, cleare glasse, and fountaines pure
Refresh Eye-sight, long to indure.

Here againe *Profit* and *Pleasure* meet.

And as foule and odious objects presented to the *sight*, cause a dislike

dislike in the spirits, that they retire and shun such objects, so *contrario verum*, the contrary holds in delightfull and pleasant objects of the sight, the spirits thereby are delighted. He saies, *Ob-* Nas. *bist. p. 224*
jects of the sight, as comming into a faire Garden, or into a faire roome,
richly furnished, and the like, doe delight and exhilarate the spirits
much. The beautifull flowers of various colours, amongst the
 lovely Bloomes of trees, and Plants, what a glorious shew will
 they make.

Flores nitescunt, discolore gramine,
Pinguntq; terras gemmeis honoribus.

Gay flowers waven with discoloured grasse,
 With rich imbroidered Robes the earth compasse.

Is it not a pleasant sight to behold a multitude of Trees round
 about, in decent forme and order, bespangled, and gorgeously appa-
 relled with greene Leaves, Bloomes, and goodly Fruits, as with a
 rich Robe of imbroidered work, or as hanging with some preti-
 ous and costly Jewels, or Pearles, the Boughs laden, and burdened
 bowing downe to you, and freely offering their ripe fruits, as a
 large satisfaction of all your labours.

Aspice curvatos pomorum pondere ramos,
Ut sua, quod peperit, vix ferat Arbor onus.

Ovid.

The laden boughes with waight of Apples crack,
 And Trees to beare their burthens strength doe lack.

Fourthly, the sense of smell, may likewise have its share of plea- 4. Pleasure
 sure in a Garden of Fruit-trees. L. Bacon saies, the smell of new and of the smell.
 pure earth, excellently refresheth the spirits, he saies, a certaine great Hist. L. D. p.
 Lord, who lived long, had every morning, immediatly after sleep, a 207. p. 208.
 clod of fresh earth laid under his nose, that he might take the smell
 thereof, and againe, Good earth newly turned up, hath a freshnesse and
 good sent. And that the Leaves and branches of some trees are oda- Nat. bist. Cent.
 rate and sweet. He saies likewise, that the Leaves of Trees falling 9. pag. 210.
 towards the middle of Autumne, yeeld a good refreshing to the spi- Nat. bist. Cent.
 rits. And that the Masse of some Apple-trees, hath an excellent 6. pag. 136.
 sent, and is used of Perfumers.

But chiefly The Pleasure this sense meets with is from the
 sweet smelling blossomes of all the fruit-trees, which from the time

of their breaking forth, till their fall, breath out a most pretious and pleasant odor: perfuming the ayre throughout all the Orchard.

Nat. hist. Cent.
4 pag 102.

The same Authour observes: That the most *Delicate Smells* are from those Plants whose Leaves smell not, and amongst other things he mentions *Bloomes of Apple-trees*.

Nat. hist. Cent.
9 pag. 210.
Hist. L.D.
pag. 295.

And in another of his *Experiments*, he saies, that generally those smells are most gratefull and pleasant, where the degree of heat is small, for those things doe rather moove the sense, then satiate it. And prefers coole smells before hot for comforting of the heart.

Now: The *Bloomes of Apple-trees, Peare-trees, Cherry-trees*, & such like, have small degrees of heat, and therefore the Odor is pleasant and wholesome.

And besides the pleasure of this perfumed ayre, it is also very profitable, and healthfull to the body. Here againe, Profit and pleasure, meet and imbrace. *An Odores nutriunt*, is a question amongst *Philosophers*, some hold sweet perfumes nourishing, doubtlesse they give a great refreshing to the spirits, and whatsoever delights, and cheeres the spirits is without controversie, very advantagious to the health of the body, for the spirits are the cheife workers in the body, from which proceed all, or most of the effects wrought in the body, good or bad, according to the temper of the spirits.

Sweet perfumes work immediatly upon the spirits for their refreshing, but *meat and drinke*, by ambages and length of time: sweet and healthfull Ayres are speciall preservatives to health, and therefore much to be prized.

Is the Curative part of Physick so worthy, and excellent, as the preservative part? Its better to stand fast, then to fall and rise againe.

Now, a *sweet perfumed, fresh, wholesome Ayre* (which is chiefly found in *Gardens of Fruit-trees*) is greatly available to that purpose, as well as pleasant to the sense.

5
Pleasure of
the Taste.

Fifthly: the *Sense of Taste* has its pleasure in an Orchard. This sense meets with pleasure at all times of the yeare, from the fruits of an Orchard. The pleasure of the other senses are to be had, but at some seasons of the yeare only. This sense has pleasure from all sorts of ripe, and raw fruits, besides meats, and drinks & many dainties made of them. The ordinary food they afford all the yeare

yeare, and the more delicate for Banquets, are also good and healthfull to the body, as well as pleasant to the tast. Here againe, pleasure and profit meet and imbrace, so the Poet:

*Hortus salubreis prabet corpori cibos,
Obletlat Hortus, avocatur, pascit, tenet.*

The garden to the body, gives sound and healthfull meats,
The Garden pleases most, draws, holds, & feeds with delicates,

In the heat of sommer, what place is fitter for the table, then some *sweet shady coole Arbour in the Garden*. And what meats better besitting that time of the yeare, then some *dainty dishes made of the coole fruits of the Orchard*. At which time cooling and refreshing the spirits from within, and without by coole Ayres, & coole meats, and drinks, is most advantageous for *health and long-life*: for these are the cheife meanes (at that season) to keep the spirits in a fine pleasant equall temper, yea some fruits have higher vertues ascribed to them then barely to nourish, some Apples are accounted Cordials: *Avicen saies, that both the tart & pleasant Apples strengthen the heart, and to such as are troubled with hot infirmities, they are a singular helpe. Consortant Cor, proprie odorifera, dulcia, & acetosa, &c.*

Lib. 6. Ca 569

L. Bacon reckons *Peare-maines among coole Cordials*.

So then: when Fruits are not only healthfull but also pleasant to the tast, there is a double worth in them.

Hist. L. D.
pag. 298.

Consider now what has been said for the *Pleasure of the Senses*; And if it be so acceptable to have the pleasure, though but of one sense, what will it be when there is a concurrence and meeting of all together, which may be had in a *Garden of Fruit-trees*: so the Poet.

*Non desit Hortis, & voluptas maxima,
Multisq; commixta modis jucunditas,
Tribuit colenti multiforme gaudium.*

There wants not in Gardens great pleasure to the mind,
And outward senses many mixt pleasures finde,
They yeeld unto the Artist Joyes of divers kind.

Profits.

We see what a plentiful and joyfull Harvest of Profits and Pleasures may be yearly reaped from an Orchard or Garden of Fruit trees.

Here's Profit of divers kinds.

1. First to a mans Estate: and that in two respects. First, in respect of housekeeping, with meates, and drinks all the yeare.

Secondly, in respect of Sale, either the fruits in their kinds, or Syder, Perry, and Wines, made of them.

Secondly, Here's Profit to the body, and that in two respects. First in respect of Health, by moderate exercise, fresh-Aires, pleasant Odors, and wholesome Meates, and drinks.

2. Secondly, in respect of Long life, by operation upon the spirits through the Organs of the body, the Eare, Touch, Smell, Sight, Taste, and through the Affections of the mind, Hope, Joy, Admiration.

3. Thirdly, Here's Profit to the Mind. And that in two respects, First in respect of knowledge, Naturall, Morall, Spirituall, Secondly, in respect of Affections.

4. Fourthly, Here's Profit to the Name, and that in two respects, first in this life, by Gifts, and benefits, Secondly after death by Fruit-trees as living Monuments.

5. Here's Profit to others, and that in two respects, first to the poore, friends, or enemies, in the present times; secondly, to posterity, or future ages.

Pleasures.

Here's likewise Pleasures of divers kinds.

1. First to the Eare, and that in two respects, first, by sweete tunes of singing birds: secondly, by gentle motion of Boughes, and leaves.

2. Secondly, Here's Pleasure to the Touch, and that in two respects, first, by coole fruits, Boughes, and Leaves: secondly, by coole fresh Aires.

3. Thirdly, Here's Pleasure to the Eye, and that in two respects, first, by exact, and decent formes of Trees, Alleyes, Walkes, Seates, and Arbours: secondly, by curious colours of the blossomes, Leaves, and fruits.

4. Here's Pleasure to the Smell, and that in two respects: first, from fresh Earth digged up: secondly, from the Leaves, and Blossomes.

5. Fifthly, Here's Pleasure to the Taste, and that in two respects: first from ripe, and raw fruits. Secondly, from dishes and drinkes made of them.

Some

Some employments as they are *Profitable* in one respect, yet they are *unprofitable* in another: yea perhaps are full of hazard and danger: either to the *state, body, minde, or name*, but this employment preserves, and is profitable to all these. Some employments are pleasant to one sense, but not to another, perhaps unpleasant, and hurtfull: but in this there's an Agreement and consent of *Pleasures to all the senses*.

And as there is a mutuall consent and concurrence of all the *Profits* among themselves, and of all the *Pleasures* among themselves, soe likewise there is a mutuall consent and concatenation of the *Profits* with the *Pleasures* one embracing another, one supporting, and upholding each other.

Five wayes of Profit, each of them in two respects.

And five wayes of Pleasure, each of them in two respects.

Here's *Profit* and *Pleasure* running along hand in hand, meetly matched together, being the most rich and beautifull King and *Queene* in all the world.

Thus having shew'd the great *Praises* that are given to this Art of Plaiming Fruit-trees, and some *Divine* and *Humane Arguments* of the Dignity and value thereof and likewise the *Profits* & *Pleasures* that are receiv'd from an Orchard or Garden of Fruit-trees, I thinke it meete to give a Caution concerning temporall *Profits* and *Pleasures*.

It's true; We have liberty to seeke earthly *Profits* and *Pleasures* in our Callings and to rejoyce in them, but yet with care, and circumspection: and with due regard to Circumstances.

A Caution in the use of Earthly things.

There is a Rejoycing in Earthly blessings which God allowes to us. Deut: 26. 11. *Thou shalt Rejoyce in every good thing which the Lord thy God hath given thee.* And Deut: 12. 16. *Thou shalt rejoyce before the Lord thy God in all that thou puttest thine hand unto: and againe Deut: 16 15. Because the Lord thy God shall blesse thee in all thy increase, and in all the workes of thy hands, therefore thou shalt surely Rejoyce: And when our wayes please God he saies: Goe, eat thy bread with joy, and drinke thy wine with a merry heart Eccl: 9. 7. Salomon saies Eccl: 5. 18. Behold: that which I have seene, it is good and comely for one to eat and to drinke, and to enjoy the good of all his labour that he taketh under the sunne, all the daies of his life, which God giveth him, for it is his portion: and Chap. 2. 24. This I sawe, That it was from the hand of God.*

No

No doubt we may use these, and other earthly blessings with Rejoycing: but all the danger is, least we take too much liberty herein, and breake beyond our bounds.

These *Profits* and *Pleasures*, being multiply'd in the Garden of Fruit-trees, we had best beware of reaching after them too earnestly: *Latet Anguis in Herba*, A subtle serpent lyes hid among these pleasant flowers, and seekes to bite us by his temptations, who has as much or more malice, and policy now, as formerly against our first Parents, whom he deceived in a Garden of Fruit-trees.

Men may become *Idolaters* ere they be aware, and so are many, even among Christians: in worshiping *Profit*, and *Pleasure*, Setting up these two for their house-hold Gods. The Prophet tells us, Ezek: 14.3. *Men set up their Idols in their heart*, and give that to them which is due only to God.

We may easily mistake betweene the use of earthly blessings, and the enjoyment of them.

The difference between using & enjoying a thing
De doctrinâ Christi lib. 1.

Austin tells us, no earthly blessings are properly to be Enjoy'd but used only: *Res alia sunt, quibus fruendum est, alia quibus utendum, illa, quibus fruendum est, beatos nos faciunt, istis quibus utendum est, tendentes ad beatitudinem adjuvamus, & quasi adminiculamur, ut ad illas, quæ nos beatos faciunt, proveniamus.* There are some things (saith he) which are to be enjoy'd; others to be us'd; those which we ought to enjoy make us happy, such as we ought to use only, are those whereby we are furthered, and are as succors, aids and helps, to bring us to those things which may be enjoy'd and make us happy.

He tells us then, whom, and what we may enjoy, *Fruendum est Patre, & filio, & Spiritu Sancto. Beatum est ad tale bonum provenisse, quo amplius non potest.* The Father, the Sonne, and blessed spirit are to be enjoy'd. And its true blessednesse to attaine to that good, which is the highest.

So then: God only is to be enjoyed, and the good things of this life only to be used, as helps and furtherances unto God. We had need therefore take heed of falling in love with Earthly things:

De doct. Christi.
lib. 1.

The foresaid Author tells us the danger of it. *Si eis quibus utendum est, frui voluerimus, impeditur cursus noster, & aliquando etiam deflectitur, ut ab his rebus, quibus fruendum est, obtinendis vel retardemur, vel etiam revocemur inferiore amore præditi: Et si amantissimis*

tates itineris, & ipsa gestatio vehiculorum nos delectarent, conversi ad fruendū his quibus uti debuimus: nollemus citò viā finire, & perversā suavitatem implicati alienaremur à Patria cujus suavitas faceret beatos. That is: If we fall to enjoying of such things as we ought but only to use, we are thereby hindred in our course, and many times even turn'd out of it. And as to the obtaining of those things which we ought to enjoy (by the love of earthly things) we are call'd back from them, and much retarded, and stop't in our way to them. And if the *Pleasures* and *Contentments* of the journey and the carriage, by which we are conveyed over much please and delight us, then we turne to *Enjoying* of those things which we ought but only *to use*, and therefore are unwilling to come to our journies end, and are intangled in corrupt delights, and brought thereby to be estranged from the Countrey, the sweetnesse and pleasure whereof maketh blessed.

We see then, when God gives us blessings largely, and gives us leave to use them freely, we are in danger to forget him: We had need therefore to set a watch, or guard upon our hearts, least *Profits* and *Pleasures* steale it, and keep it to themselves. But what a shame is it we should have fewest thoughts of God, when he is most mindfull of us. And that we should fall so much in love with the *Token*, that we forget *Him that sent it*.

And now: having answered the doubts and discouragements that have hindred some from entring upon this part of the Husbandmans work; The *Art of Planting Fruit-trees*, and shew'd the great esteem that all men have of it, and the value, and dignity thereof from *Divine and Humane Arguments*, what a rich confluence of *Profits* and *Pleasures* are (from time to time) brought unto us by it, with a *Caution* in the use of these things.

What remains, but that I also discover how we may obtaine our desires herein, by what means the work may be done, with *most speed, and best effect*.

I shall first speak of a *Nursery of young Plants*, and shew the manner of sowing of *Kernells*, or *Seeds of Fruits* and their preparation and ordering (by *grafting* and *Inoculating* (for transplanting into *Orchards, Gardens, or Fields*: (although some may plant an Orchard a more speedy way, to buy yong trees ready grafted, or to plant stocks of divers yeares growth, and after they have grown a year or two, to graft them.)

I shall set downe all these things as briefly as I can, so that withall I make them plaine to the intelligent Reader, laying downe the most materiall, and essentiall things concerning this *Art* (For long and tedious discourses about things that may be comprehended in few words, (as many use) they doe often mislead men, so as it is not easie to see the most materiall things concerning their subject, or what they drive at, whereas a breife, and plaine discovery of them may better be comprehended, and remembered.

1 First then: Let there be a Plot of ground (more or lesse) digged up about the time when Fruits are ripe, and let all the *Grasse, Weeds, Roots, Seanes, &c.* be clean picked out, & the ground cast into Beds about a yard broad, and spaces between about a foot in breadth, to passe between them, to *sow, see, weed, &c.* And then procure *Kernells of Apples, Peares, Crabes, Cherry stones, Plum stones,* and the seeds of divers kinds of Fruits, and these may be set, and sowed, from the time that the fruits are ripe, untill the Spring (except in frost) in this manner.

*How to sow,
and set, seeds,
stones, kernels
&c.*

Having made the Beds leuell with a Rake, sprinkle the seeds upon them all over, each kind by themselves, and set, or sow the stones by themselves, then take a spade, and turne in the seeds, & stones about a handfull deep, and after rake them all over, and (that none may be left uncovered) sift some small mould with a *Sieve*, all over them: and so let them rest all winter.

And carefully observe that *Mice* devoure not the seeds in *Winter*, if you perceiv it, set *Traps*, and lay *Rats* have to destroy them.

In the *Spring* or *Summer*, let them be weeded from time to time, cleane, and if the weather be dry, let them be watered now, and then, & they will make a growth the same yeare, according to the strength, & goodness of the ground wherein they grow. Plants comming of seeds or stones, are far better then *Suckers* from *Roots* of Trees, although such are good and usefull for *Stocks* also.

*Draw Plants
of Seeds.*

In *Autumne* when they have done growing, let the biggest of them be transplanted into other Beds of ground prepared for that purpose, thus: Let the ground be digged, and cast into square *Plots*, or long *Plots*, as you will, and laid levell with a Rake, then set the young seed Plants therein in this manner. Having cast up the

the Borders handsomely on each side, stretch a *Line* from one side to the other: then take a *Setting-sticke* (that is, a hard peece of wood about a yard long, with a handle at the top, and made sharp at the end, or pointed with iron) and thrust it into the ground halfe a foot, or a foot deep, (according to the length of the *Roots*) close to the *line*, and make *holes* all along from one end of the *line* to the other, about *halfe a foot*, or more, as you will: And having prepared the *seed Plants*, by cutting off all the *side Twigs*, and the *ends or bottome of the Roots*, set them in order in the *holes* to the top of their *Roots*, and close the mould about them: Draw the *biggest* first, and set them by themselves, & the *least* by themselves. Then take up the *line*, and stretch it againe, about a foot from the other *Plants*, and make *holes*, and plant more *seed Plants*, and set them as before.

Then take up the *line*, and stretch it againe, a foot and halfe from the *Plants* last set, that there may be a convenient space of ground to passe between to weed the *Plants*, and to *Graft* and *Inoculate* them (being growen fit) And having made *holes*, and pruned the *Plants*, set them as before.

And thus set the *Nursery* throughout, and many of these will be ready after one yeare to *Inoculate*, and after two yeares or three, to *Graft*.

Now for those that were left upon the *Beds* where the *Sticks* were sowne, the largest being drawne as before, they may grow there a yeare longer, and then be *transplanted*, or else may be removed at the same time; be sure to *transplant* all young *Settled Plants*, for by that meanes they get good *Roots*; which of themselves thrust down *one single Root*, for the most part. And being growne a yeare, or two after *Inoculating*, or *Grafting*, they are fit to *transplant*, to make *Orchards*, or into *Fields*, & *Phages*, at a competent distance, as shall be shewed when I speak of *setting Trees*.

Thus men may in a few yeares prepare multitudes of *Young Trees* for themselves and others, to give, or sel as they please.

It is good likewise to procure *Crab-sticks* from the *woods* and *wast grounds*, which being growne a year or two, may be grafted, and either grow where they were first set, being fit places, or *transplanted* elsewhere.

The *smaller* these or any other *Plants* are when they are removed, the better they grow: so that it is a great *Error* in men *grow sure*.

to chuse the greatest *young-trees* to transplant into their Gardens.

Its true: the greater they be the better, were they to grow still in the place without removing, but the removing of great Plants is more dangerous to them then to small Plants: Experience proves this sufficiently to the losse of many a good Plant.

Now for the manner of *Inoculating* and *Grafting* these Plants, being thus prepared, and grown fit.

The time of Grafting.

First concerning *Grafting*: wherein we must consider the time: *February* and *March* (usually with most) are the too cheife *Months* for *Grafting*, but we may begin sooner, and its best so to do, especially with *Cherry*, and *Plum-Grafts*: If the weather be open, without frost, in the beginning of *January*, or in *December*. Yea I have grafted some (with good successe) in *November*, and sooner, but in the beginning of *January* we may begin, if frost hinder not. And such as have multitudes to engraft must needs begin early, els they'l want time.

Grafts of *Cherry* and *Plum-trees* must be grafted soonest, because they bud soonest. And besure to begin with them, ere they begin to Bud forth, and then with *Pear-trees* and *Apple-trees*.

How to keepe Grafts.

Grafts of any kind may be gotten and kept many daies, or many weeks, the cut ends, or the one halfe in length, being covered with mould, or they may be Grafted immediately, so soon as they are gotten; *Graft* none but those of one years growth, only the last years sprout, the fairest, & thickest are best, They may be carried many miles, being bound up close (from end to end) in a hay band, or better in a Box of Mould, or their ends stuck in clay.

Instruments for Grafting.

That this worke may the more effectually be done, we must have fit *Tooles*, and Instruments for that purpose: First a good *sharp-knife*, and strong, to cut off the top of the stocks. A neat *sharp-saw*, to cut off the head of some stocks which are grown too bigg for the *knife*: also a little *Mallet* and wedg to cleave the bigg stocks, a small *Pen-knife*, to cut the *Grafts*, (as I shall shew anon) and keepe it very sharp for this purpose only; There must be likewise *Clay* prepared with *horf-dung*, well mixed together, as *Mortar*, as much of the one, as of the other, and *Rushes*, or strong, soft *Flaggs* to bind together the *Grafts*, and the *Stocks*. With a small *hand-basket* to carry the *Grafts* in, with all the Instruments for the worke.

Manner of the worke.

Having these things in a readinesse, the time being come, go to the *Stocks* that are ready (small or great) And those that are small.

small (about the bignesse of ones little finger (which are of a competent bignesse; & we loose no time in making use of them) Graft them in this manner.

If they be *Cherry-Stocks*, or *Plum-Stocks* to make *Wall-trees* of, graft them low, within halfe a foote, or lesse of the ground, but if they be for *Standards*, then Graft them an Ell, or yard and halfe high: thus.

Cut off the top of the *stocke* in some smooth, straight place, *The first way*
that may be answerable to the straightnesse of the *Graft*, when of Grafting,
set on; Then prepare the *Graft* thus: observe which side is straight cal'd *slicing*
test at the bottome, or biggest end, that so it may fit the straight or *Backing*
part of the *stock* when set on: Then cut *one side onely* of the *Graft*, downe a slope, about an inch, and a halfe long; either from the *knot*, or *seame*, if the part below it be smooth, and straight, or els from a *Bud*, and cut through the *Barke*, at the top of the cut place, and make it like a shoulder, that it may rest just upon the top of the *Stocke*, but cut not this shoulder too deepe, (only through the *Barke*, or little more,) but cut the *Graft* thin at the bottome of the cut place, yet leave on all the *Barke* on the opposite side, make this cut *smooth, and even* from the top of it to the bottome, without dints, or ridges, (which is of speciall concernement) that so it may be sure to joyne close to the *Stock*.
The *Graft*, being thus prepared, then go on to prepare the *Stock* further, lay the cut part of the *Graft* upon the straight side of the *Stock*, and measure just the length of the cut part of the *Graft*, And (with a knife) take away so much of the *Barke* of the *Stock*, but cut not any of the *Wood* of the *Stock*, then lay the cut-side of the *Graft*, upon the cut part of the *Stock*, and let the *shoulder* of the *Graft* rest directly upon the top of the *Stock*, so that the cut-parts of both may joyne *even, and smooth*, all along, and so bind them together close, with some strong *Rushes* or *Flaggs*, then Clay them, lay on every side, & an inch above, and as much below; some of the *Clay* prepar'd as before, close it above, & below, & on every side, & that's all that needs to be done for that time.

Let not *Grafts* be too long, *Four*, or *five*, or *six Buds*, above the *Stock*, is enough, the top may be cut off, if the *Graft* be long: this I accompt the best way of *Grafting*, for divers Reasons.

Secondly, there is another way of *Grafting* *small Stocks*, such *Way* of *Grafting*,
as are but just as bigg as the *Grafts*, you meane to set on. *ting.*
And those *Stockes*, are prepared thus: the top being cut off

over against a smooth straight place, as before, the *Bark* of it must not only be cut, but also the *Wood*, quite through to the back side of it at the top, directly like as the Graft is cut (as was said) in length as much as the cut part of the Graft, the manner of cutting the graft for this, is the same with the former; then lay the cut part of the Graft upon the cut part of the *Stocke*, and let the top of the *Stocke* (even the very bark of the outside) be directly under the shoulder of the Graft, that so the cut parts both of Graft, and *Stocke*, may joine, & answer one another, from the top to the bottome, and so bind and *Clay* them as before.

Third way of
Grafting.

Thirdly: there is another way of Grafting generally practised, though not so sure a way as the two former: and yet a better way for great stocks, for none but small stocks are capable of the two former waies, it is thus: Those *Stocks* that are large (three or four inches in compasse) must be cloven, the tops being cut off in a straight smooth place, cut the roughnesse of the top smooth with a sharp knife, then knock in a strong *knife* or *chissell*, a very little beside the *pitch*, and if it be capable but of one graft, then be sure to cleave it on that side that is smooth and straight, if it be fit for two, then be carefull to chuse both sides smooth, being cloven with the *knife*, and a *wedge* of *Box*, or other hard wood knockt in, to keep it open (then prepare the Graft, or Grafts) you meane to put in, cut both sides of the Graft a slope downe from the *knot* or *seam*, or else from a *Bud*, about an inch, or little more, shoulder both sides of the Graft, as was said of one side, for the other sort of grafting, and make it thin at the bottome. Let the outside of the Graft be somewhat thicker then the inner side, unless the stock be very big, if it be so great as to pinch the Graft much, then make the inner side of the Graft thicker, that so it may preserve the outside from being pinch't too much.

A speciall
Rule.

And in setting in all Grafts into the cleft, observe this for a most speciall Rule, to joine the inner side of the bark of the Graft, to the inner side of the bark of the stock, that the sap may more easily come out of the Stock, into the Graft to feed it, for the main current of the sap is betweene the bark and the wood. And regard not the custome of many Grafters, in setting the outsides even and smooth, not considering the insides, their successe is according to their skill, for the most part. We know the Bark of a big stock is much thicker then the bark of a slender graft, & if the out-

sides

sides be smooth, and even, the inside must needs be uneven.

But I say to joyne the inner sides of both barks together, all along the cleft, is the Principall thing in Grafting of such big stocks.

The Grafts being thus placed in the Stocks, and the wedg pulled out, then Clay them close on every side, an inch above the top of the stock, to the bottome of the Cleft.

In chusing Grafts, chuse not those that are very small, and slender, they commonly fayle; but take the fairest upon the tree, and especially those that are fullest of Buds. Choice of Grafts.

Graft every Cyener into its own kind: as all kind of Apples together, and also on Crabstock (which is the wild Apple) Pear-grafts, on wild Pear-stock, & the like of other kinds: joyn not contrary, or different kinds, they never come to perfection: as Cherry-grafts on Plum-stocks, or the like. Experience makes it manifest to be but lost labour, they'll grow (it may be) a yeare, or two, and then dy.

And in choice of Grafts, be sure to consider what Trees (of all kinds) are the best bearers, some kinds seldome misse, and some other kinds (though good fruits) seldome hit, and therefore, take information from those persons, that know (by experience) the nature of the Trees in this regard, and accordingly chuse, or refuse, Grafts from them. Observe the like in choyce of Vines: The Parsley Vine of all other is best for these parts.

Observe the best bearing-trees.

Such Grafts as are bound (as is said of the two first waies of Grafting) must be unbound: after a certain time, when they have well closed with the Stock: about Midsummer (or before) they will be fast enough upon the Stock, so that they may without danger, be unbound: but if they be not unbound the band hinders their growth: and besides the winds (when the grafts are growne big, & bushie) will break divers of them unlesse they be unbound, and also by some means supported, and strengthened in the grafted place, which may be done, by tying a small stick to them, a little above, and as much below the place, where it is engrafted; but before you thus bind the stick to strengthen the Graft, put a little Clay round about the engrafted place (being unbound) it will cause the sap sooner to cover the head of the stock.

Unbind Grafts:

After Grafts have had their full growth the first yeare, they must be Pruned, such as neede Pruning: As for wall Plants its no matter of how many Branches they spread, more the better: Prune young Grafts.

better

but for those that are Grafted low, and yet must be made standards, leave only one shoot, *the strongest and biggest shoot*, and cut off all the rest, and let not that straight shoot begin to spread, till it be an *Ell long* at least, rather more, and then let the Branches spread, and enlarge themselves.

And from yeare to yeare, prune off those shoots, and branches as are superfluous and grow too neer one another, and preserve only such as are fit to make the Tree of a comely forme. And if any spire up, and shoot too strongly upwards in the middle of the Tree only, and spread not sufficiently (as is often seene in *Pearc-trees* and some other trees) cut off from time to time, those strong shoots in the middle, and still preserve the outmost branches, for all fruit-trees ought to spread as much as may be, so that the branches hang not too neere the ground.

And so much concerning *Grafting*, and also *Pruning* while they are young Plants.

I shall now speak of the other work whereby Fruit-trees are increased. *Inoculating*, or putting a small Bud into a stock, which (as to the effects of it) is the same with *Grafting*, but differs much in the season, and in the manner of the work.

*Inoculating
Buds.*

The time for *Inoculating Buds* is about *Midsummer*, a fortnight before, & a fortnight after is the chiefe season: though Some Plants (full of sap) may be done afterwards with good successe.

That this businesse may be done to good purpose, it must be considered whether the *Buds* which we meane to get, are sufficiently grown or not, they must not be *too young and tender*: and we shall finde that some kinds of Trees have *Buds* ready sooner then others. As the *Apricot* especially, and those that shoot strongly. Let then the *biggest and strongest shoots* be cut from the Tree, that have grown since the spring, to that time, and cut off the top of the shoot, (all these *Buds* that are too small and tender) and also cut off the Leaves of the other about a quarter of an inch from the *Bud*, and by that part left, we hold the *Bud*, being taken off the Branch: but leave not on the whole *leafe and stalke*, as some doe, for the aire (by meanes of the leafe) extracts and drawes out the sap of the *Bud* in a short time, and so spoiles it.

*Observe the
kinds.*

Then goe to the Plants you intend to *Inoculate* which must be

be like (as to the generall kinds) with the *Buds* that you intend to set on: as *Aprecot Buds*, and other *Plum-Buds* on *Plumstocks* that are wild-stocks: the *White Peare plum stock* is accounted the best to inoculate *Aprecot buds* on, or other choice *Plums*, it being a Plant full of sap: and in chusing *Buds*, or *Grafts*, be sure alwaies to cut them from those kinds that experience shewes are good bearing *Trees*.

Now in setting on the *Bud*, first make a crosse cut upon some smooth place of the stock, (if it be for a wall-tree, then halfe a foot, or thereabouts from the ground) & from the middle of the crosse cut, make another straight down, about an *Inch long*, or something lesse, only through the *Bark*, and with the end of a Pen-knife, raise up the bark on both sides, as much as to let in the small *Bud*, then make hast to prepare the *bud* (for a man must be quick at this work, else the Aire, by sudden drying the *Bud*, and the cut part of the stock will much hurt:) Cut the bark on both sides the *Bud*, and about a quarter of an inch above, and as much below the *bud*, and let that end which is to be downwards be a little sharp, that it may more easily goe downe, betweene the Barke, and wood of the stocke, and throw away the bark on the opposite side, then with a Quill the one halfe cut away, or a Pen of Steele, (made thin for the purpose) take off the *Bud* and bark, and be sure there be the root of the *Bud* in it, if there be a little hole in the middle of the *bud* within, then the root is not there, throw away that bud, such will not grow, but the *Bud* being well taken off, then hold it by the stalk of the leafe, as before was said, and put it carefully betweene the bark and the wood of the small Plant, prepared as before, and let the top of the *bud* joyne close to the crosse cut, then bind the *bud* with a soft Rush, that is strong, bind it close to the stock, especially in the middle (where the Root of the *bud* lies) and so let it rest.

After a certaine time the *Buds* must be unbound, and some Unbind buds sooner then others; some stocks grow more in a week then some in due time. others in a month.

Now if this worke be done early in the yeare

before Midsummer, upon young stocks very full of sap, these may be unbound about 14. or 15. daies after, or a *General Rule* may be this, when a stock is so grown as that the band about the *Bud*, does much straighten the *Bud*, which may be seen by the swelling of the Plant above and below the *Bud*, then the band must be cut and taken off. But those that are done neere the end of July or after, will not need unbinding so soon. Now after unbinding you may see which *Buds* take hold of the stock, and which doe not, those that are good, are fast upon the stock, and appeare in their naturall colours as when they were set on, those that doe not hold, will have lost their colour, and (it may be) withered and dried.

*Cut off stocks
above the
Buds.*

Such as are good, meddle no more with them till the *Spring*, then cut off the stocks an inch or two above the *Buds*, so the *Buds* will spring out and grow according to the strength of the stocks. And in Autumn after they may be transplanted or if you please such *Buds* may be transplanted the next *Autumne* after inoculating, which is the surer way for growing. And when these *Buds* have growne one yeare, then cut off the stock close to the buds, and they will cover the head as Grafts.

*How to carry
Buds.*

If *Buds* be not ready at hand but must be fetcht many miles in that hot time, then speciall care must be taken in the carriage of them. Thus: Being cut from the Tree, cut off the tops of the Branches, and the leaves neere the *Buds* as before, then binde them together, and wrap them in *fresh Leaves or Grasse* to keep them cool, and they will keep good two or three daies, but yet make all the hast that may be to inoculate them.

*Marke the
Stocks.*

Having Grafted or Inoculated Stocks: make one *Letter* or two upon the stock below the *Graft* or *Bud* (whereby to know the kind of the Fruit) and if any be stolen they may thereby be knowne, being found againe. Its done with the point of a *Pen-kniffe*, cutting through the bark, the forme of a *Letter*, or any other figure, whereby to know the kinds of fruits. And so much for *Inoculating Buds of Fruit-trees*.

*Directions in
the choice of
Grafts and
Stocks.*

The choice of right kinds of *Grafts*, and *Stocks*, and the joining of them together according to their natures is so necessary, and some observations about them are so essentiall to the work of profitable planting, that except they be knowne, and practised,

men

men loose much of the profit they might have, if rightly observed.

A few speciall directions in any Art, though consisting but of few lines, containing the Principles and essentiall parts, are better, and more to the advancement of the Art, then great Volumes upon the same subject when men (as many doe) rove about upon unnecessary things, and strange fancies without any solid grounds, beside the life of the businesse. If men misse the Principles and essentialls of an Art, they discourse of it to little purpose.

So also in the practise: and therefore it has many times fallen out that some men having laboured much & spent much time, & cost, in Planting Fruit-trees, yet their labours have not succeeded well, because there has been mistakes in some principall, and very materiall things; either the Trees have not grown well, or if prospered, and come to a large growth, yet they have not borne Fruit well, which hath been a great discouragement, not only to themselves, but to others who have seen it.

Now among all Observations about this Art of Planting Fruit-trees, I know none of greater moment, or more essentiall to the profitable proceeding in it, then the Choice of right kinds, and the joining of Grafts, Buds, and Stocks fit for each other. I shall therefore mention some particulars of the Twelve kindes of Fruit-trees which I have made choice to speak of, and shew which I account most profitable, and best to propagate and increase, and how they fit severall stocks when the Cyences are to be Engrafted.

Of Apples.

First concerning Apples: In the choice of Apple Grafts we must consider not only the goodnesse of the Fruit, but also, whether the Trees be good bearing Trees naturally: whether such as have known them divers yeares, can say by experience they beare well, but many look not after this so much as what kind of fruit it is, In respect of goodnesse. And thence it comes to passe, that some men having store of faire, large Fruit-trees, they have but little fruit from them. Therefore let the generalitie of Fruit-trees (both in the Orchards and in the Fields) be of right kindes in respect of bearing, as well as in respect of goodnesse of the fruit, and then for variety, there may be some of other kinds of good and choice fruits though they beare but few, and seldome.

And for particular kinds of Apples I commend the Sommer-

Peare-

Pearemaine, and the *Winter Pearemaine*, not only for speciall fruits, but also for good bearing kinds. So likewise the small *Pippin*, a good *Apple*, and a great bearer. The *Harvey Apple* is a very choice fruit, and the trees beare well. The *Queene Apple* is a great bearing fruit, and good: So the *Gillofloure*. Many other kinds might be named, that are speciall good fruits, and great bearing kinds, and some persons prefer one kind, and some another. But the great and generall Rule in this, and all other kinds of Fruits, is, to take Grafts from those Trees which are knowne by experience to beare store of fruits, and good, and to multiply these as much as may be.

As for Stocks fit for *Apple Grafts*, I account *Crab-trees*, better then sweeter *Apple-trees* to Graft on, because they are usually free from the *Canker*, and will become very large Trees, and I conceive will last longer then Stocks of sweeter *Apple-trees*, and will make fruits more strong, and hardy to endure frosts, and cold weather in the spring time: yet it is good to chuse stocks of some pleasant Apples, to graft some choice fruit upon. Because that the stock has some small influence upon the fruits to make them more delicate, if grafted upon a choice stock. Although notwithstanding the graft may be said to Govern, as is shew'd at large.

2
Of Peares.

As for *Peares* there are multitudes of kinds, as well as of *Apples*, some preferring one kind and some another, and one and the same fruit, is called by severall names, in severall places. A late Author saies he is perswaded there are 400. or 500. severall kinds of *Peares*. Now therefore; it is a point of wisdom to chuse Grafts from the best bearing kinds, although (it may be) not so delicate to eat as some others. I know none but they are very usefull, and profitable.

The *Winsor Peare* is accounted one of the best with us, some kinds beare not well, but some others doe, therefore observe the former Rule. The *sommer Burgamet* is a choice fruit, and the Trees beare well.

But for a costant bearing kind. I know none better then the *Catherin peare*, but they must be quickly spent, for they are no lasting fruits: a man having great store, may make excellent Perry of them. For they have a pleasant juyce.

The *Greenesfield Peare* is an excellent *Peare*, and will last indifferent well, and is a great bearer.

There is a *Peare* they call a *choke-Peare*, which is accounted a speciall kind, for *Perry*, although the *Peare* to eat, is stark naught, and therefore men may adventure to plant the Trees in the fields and hedges, and need not feare stealing of the fruits. I advise (for that reason) to plant many of the Trees, on purpose to grinde the fruits for *Perry*. M. Parkinson saies the *Perry* of these peares is scarce discerned from wine, neither by taste nor colour, after it hath been kept certain Months.

The best kind of stocks to graft *Peare-grafts* upon, are such as come of the *Seeds or Kernells of Peares*. I know no difference amongst these, but all good to graft upon. And I utterly dislike grafting these fruits upon *White thorne*, or upon any kinde of stocks beside *Peare-stocks*. The fruits are naught (having a hard and stony core) if grafted upon a *Thornetree*.

There are many kinds of *Cherries*, The *Flanders-Cherry* is most generally planted here in England, and is a great bearing fruit. ³ Of *Cherries*. there are two sorts of them, the *Early*, and the *late Flanders*; the early is almost as soone as the *May-Cherry*, it follows close after, and then the *late Flanders-Cherry* upon that. The *May-Cherries* are tender, the Trees must be set in a warme place, upon some south wall, or morning sunne. but the *Flanders* both kinds beare well in Orchards, and feilds at large, both kinds are very good, and good bearers.

The *black hart Cherry* is a very speciall fruit, and a great bearing fruit; and doubtlesse exceeding proper to presse for wine, either to drinke of it selfe, or to mix the juyce with *Syder* to give it a colour, as *Claret-wine*. it being of a deepe red, and a small quantity of it, will colour a gallon of *Syder* or *White-Wine*. There is a *Cherry* we call the *great bearing cherry*, of M. Millen. It may very well be called the *great bearer*, for the Trees seldome fayle of great store of fruits, although in a cold, and sharp spring. It is something a tart fruit, of a very deep red, almost blackish, when full ripe. The juyce is very proper to colour *Syder*, *Perry*, *White-Wine*, or the like.

This kind of fruit is most fit for cold Countries in the North parts, and although it be not altogether so pleasant as some other *Cherries*, by reason of the tartnesse of the juyce, yet let men know that *sharp Cherries* are accounted more wholesome then the sweet. And such as plant Trees of this kind may have good store of Fruits, when others (it may be) want, who have none of these Trees.

Concerning *Stocks* fit for *Cherry-trees*, I account the *black Cherry stock* the best, to graft any kind of *Cherry* upon. Yet some say the red *Cherry-stock* is best for *May-Cherries*. But the *black Cherry stocks* are goodly straight Plants and full of sap, and become greater Trees then the red *Cherry-trees*.

4
Of *Plums*.

There are very many kinds of *Plums*, many more then of *Cherries*. I esteem the *Muske Plum* one of the best, being a faire large black plum, and of an excellent rellish, and the Trees beare abundantly. The *Violet*, and *Premorden plum-trees*, are very great bearing trees, and the fruits pleasant, and good. The *Damasco-Plum* is a good fruit, and the trees beare well.

Many other kinds might be named, very good plums; some approve of one kind, and some of another, but the dryest plums which part from the stones, are accounted best.

Plum Grafts must be grafted, or inoculated upon *Plum-stocks*, not upon *cherry stocks*, or any other kind of *stocks*, that I know. The *White Peare-plum stocks* are accounted the best, and the *Damson stocks* the worst, as being dry *stocks*: so that *Grafts* cannot take, nor thrive upon them. Those *stocks* of *plums* which have large leaves, and full shoots, I account the best.

Graft not *Plum grafts* upon *cherry stocks*, nor *cherries* upon *Plums*, as some prescribe: different kinds will not agree together.

5
Of *Aprécocks*

Though *Aprécocks* are (in the generall) accounted *Plums*, yet because of the excellency of the fruit they may be spoken of by themselves. I know but few kinds of them, but some I know to be far better bearers, some are larger then others, and some sooner ripe then others. All good fruits. Ther's one kind that is a very great bearer, and a faire large fruit, observe then those Trees that usually beare well, and get *Buds* from them at the season to *Inoculate*, as is shew'd p. 50. for these must be propagated only by the *Bud*, not by grafting. I account the *white Peare-plum stocks* the best to *Inoculate Aprécock Buds* upon, although they may be done

done upon other *Plum-stocks* with good successe, if they be good juycie stocks, able to give large nourishment, for *Aprecock trees* require much nourishment. I shall joine the *Neltrine* with the *Aprecock*, although another kind of fruit. The best kind that I know is the *Roman red Neltrine*. But it is very hard to be propagated: as for *Grafting*, none take that way, and but few with *inoculating*, which I concieve is the reason it is the dearest of all Plants with us. The *yellow, and greene Neltrines* are much short of it in goodnesse.

The *White Peare-plum stocke*, (though accounted the best for any *plum*, yet I find) is scarce good enough for this fruit to be *inoculated* upon it, though some doe indifferent well.

But I hold it best to inoculate the *Roman red Neltrine* upon the Branch of an *Aprecock* which before hath been *Inoculated* upon a good *Plum-stock*, that it may give not only a larger, but a finer nourishment then ordinary *Plum-stocks* can doe.

Of *Peaches* there are divers kinds: I know by experience the *Nutmeg*, and *Newington Peaches* to be excellent tasted fruits, and very good bearers, especially the *Nutmeg Peach*, which makes amends for the smallnesse of the fruit: but the *Newington Peach* is a very large, and gallant fruit.

These require choice *Plum-stocks* to be *inoculated* upon, as the *White Peare plum stock*, or else stocks comming of *Peach stens*.

I know but one kind of *Figs* that come to ripenesse with us in England. The *great Blaw-fig*, as large as a *Catherine Peare*. The trees grow in divers Gardens in *Oxford*, and beare their fruits to perfect ripenesse, if ordered as they should be. The trees must be set against a South wall, and be spread up with nayles, and Leathers.

These trees are increased from the Root of the old tree; draw up the small suckers, and plant them, or the cuttings of it will grow, as of a *Vine tree*. These need neither *inoculating*, nor *Grafting*.

Some Authors affirme that there have been *Vine-yards* in England in former times, though they be all destroyed long since. Divers places retaine the name of *Vine-yards* still. At *Bromwell Abby* in *Norfolke*: and at *Else* in *Cambridg-shiire*: what else is the meaning of these old Rimes.

*Quatuor sunt Elia; Lanterna, Capella, Maria;
Et Molendinum, nec non dans Vinea vinum.*

Englished thus:

Four things of *Elie Towne* much spoken are,
The *Leaden Lanthorn*, *Maries Chappell* rare,
The mighty *Milhill* in the *Minster field*,
And fruitfull *Vineyards* which sweet wine doe yeeld.

And doubtlesse men might Plant *Vines* with good successe, to make good wine even with us. There are many kinds of *Vines*, but I know none so good, and fit for our Climate as the *Parsley Vine*, we see by experience yearely it beares abundance of fruits, unto perfection. And whosoever would plant *Vines* in England, I think he cannot meet with a better kind then the *Parsley Vine*, both for bearing, and goodnesse. The *Fox Grape* is a faire large Fruit, and a very great bearer, though not of so much esteeme as divers others.

The *Red and White Muscadine Grape*, is an excellent fruit, and if the *Vines* grow upon a South wall, and be well ordered, they beare store of good fruits.

9
Of Quinces. I know but two sorts of *Quinces*, the *English and Portingall Quince*. The *Portingall Quince*, I esteeme as the better, both for bearing, and use. These are increased from the *Roots of old trees*, *Suckers* must be drawn up, and set in the *Nursery*, or in other convenient places, which being grown up, must be Grafted with some grafts from *old bearing trees*, but the custome is (for the most part) to nurse them up without grafting, and so ordered they are long ere they come to beare fruit.

Therefore I advise to *Graft, or Inoculate* them, with *Grafts or Buds from old bearing Trees*.

10
Of Mulber-
ries. There are two kinds of *Mulberrie-trees* with us in England, the *Blacke*, and the *White*. As for the *White* I never saw any of its fruit, they very seldome beare any with us. But the *Black Mulberry-tree* never failes of fruit after it is grown up. These *Trees* are not increased by *Grafting, or Inoculating*, but by *Cuttings* from the *Branches, or sides of the Trees*: Cut a *Bough* off, as big as a mans arme, and after cut it in small *Truncheons*, or peeces a yard long
or,

or more, lay these in the ground a foot deep, only the one end out of the ground a hand breadth or two, or thereabouts, and keep the earth moist with some good fat water from a standing Pool, or Dunghill, and clean from weeds, and the first or second year, usually these peeces spring up with severall shoots, all which may be cut off with some small Roots, and Planted at a fit distance, and the old Root will yearly send out more, which may either be cut off as before, or else bowed down, and laid in the earth, on one, or severall sides, which will take root and multiply abundantly, and in a few yeares be fit to be transplanted.

These kinds of Fruits are of least esteem with us, yet some like them well being ripe, and almost rotten.

II.
Of Medlers.

The Trees are increased by *Suckers* from the Roots, and need not *Grafting*, nor *Inoculating*, but if the Fruit be small, then get some Buds or Grafts from those Trees which beare large Fruits and Inoculate or Graft upon small Plants, or upon the small Boughs of great Trees. According to directions given.

Walnut-trees are propagated from the *Nuts*, which may be set from the time of ripenesse, untill the spring, an Inch deep or little more, and afterwards transplanted, and set at a very great distance 24: or 30 yards asunder: for they are very large spreading Trees.

12.
Of Walnuts.

Be sure to chuse of the best Nuts to set, the fairest nuts, and thinnest shells, and good bearers.

Thus much (briefly) concerning the best bearing Trees, and how they are propagated.

As for those *Fruit trees* which beare but little, or no fruits, by reason that *Grafts* and *Buds* were not chosen from good bearing kinds, wherewith they were engrafted, I advise (by all means) to *Graft*, or *Inoculate* such againe, though great, and old Trees, such whose boughs are as big as a mans hand-wrist, or smaller, may be cut off, and grafted in the Cleft, with a cupple of good Grafts, of good bearing kinds, but such Branches, as are very great, I should rather cut off a convenient height from the ground, a slope-wise, that no wet may rest upon the top, and then after a yeare, or two, to graft the small Shoots or Branches that are put forth, or some of them; this is a better course, then to graft such great Branches, for that moisture will get into the top, and rot the Branches, and perhaps the Body too, ere the Grafts can cover such great heads.

Graft old Trees, if bad bearers.

Make Arbors of fruit-trees.

As concerning *Arbors, Seats, &c. in Orchards and Gardens*, I advise men to make them of *Fruit-trees*, rather than of *Privet*, or other rambling stuffe, which yeelds no profit, but only for shade. If you make them of *Cherry trees, Plum-trees*, or the like, there will be the same advantage for shade, and all the *Fruits* superadded.

All that can be objected is, that *Fruit-trees* are longer in growing up, then *Privet, Virgin-Bower*, or the like, whereof *Arbors* are commonly made. It is answered. Though *Fruit-trees* are something longer in covering an *Arbor*, then some other things, yet they make sufficient amends in their *lasting and bearing fruits*.

Of Transplanting Trees.

I shall now give some *Rules* concerning *Transplanting young plants*, after a yeares growth, or more, whether *Inoculated* or *Grafted*.

The time for this work (in generall) is in *Autumne*, when trees have done growing, and that is divers weeks before the Leaves fall. Stay not (as the custome is) till November, or after, before you *transplant*, for the best time is about the later end of September, but because some trees are ready for *Transplanting* sooner then others, observe this *Rule*.

Immediately after Plants have done growing, its best to transplant them. And when they have done growing may be seen by the top, or end of the Plant, the top of the Branches will be closed, or shut up, and no more small Leaves will appeare, as in those that have not done growing.

Early Removing best.

Its a great advantage to *remove plants betime*, for such grow a while after in their *Roots* before winter, and thereby not only preserve themselves in winter, but also make some preparation against the *Spring*: which those removed in *Winter* cannot doe. Stay not therefore till the Leaves fall ere you remove, although they may be remov'd then with good successe, but it is not so good at that time as before.

The time of removing being come, and the place prepared for setting them againe, then be carefull in taking up the plants, dig round about them, and take off the mould from their *Roots*, if it be a small plant it may be drawn up easily, the mould being taken away, if it be great, and the *Roots* spread much, then they may

may be cut about halfe a yard from the body of the Plant, and the greater it is, the further off cut the Roots: and so draw it up: and break off all the Leaves the first thing you doe, for the Sun and Aire (by meanes of them) extract the sap of the branches.

The next work is to prune the Roots and branches, as they need. All the ends of the Roots must be cut smooth, and most of the small strings, or fibra's cut away, that so the mould may close to every side of those that are left, and new strings may put forth at the cut place: and leave not all the Roots (as the custome of some is) it much hinders the growth, the mould cannot possibly be made to close about all of them being many, as it may about a few.

Likewise if the Plant be of 3 or 4 yeares growth or more, some of the Branches must be cut, & say not as many doe, her'es a faire tree already, why should we cut away any part of it? but they must be content to loose some of the Branches, else they are in danger to loose all: for removing of great Plants, is a great check to nature, and if a few Roots cut short (as they must be when removed) be put to feed many and large Branches, they'l have but slender and poore nourishment, not sufficient many times to preserve life, much lesse to make a large growth.

But if Plants are very small (of a yeare or two yeares growth) you need not cut the Branches, except such as crosse one another or grow too nigh together, but cut off the ends of the Roots of all, because if cut, many small strings or fibra's shoot out at the cut place, which draw nourishment for the Plant, which without cutting would not.

Plants being thus prepared, the next thing is to set them again in the ground. If the soyl be dry they must be set so much the deeper, yet take heed of setting below the good soyl. In low and moist grounds set not so deep, as in that which is dry. The hole for the Plant being digged, set in the Root prepared as before, and cast in the smallest, and best mould next to the Roots, and see that the small mould runne between all the Roots, to that end, stir and shake the Plant, that there may not be any hollow place where the mould falls not, and being filled up, water the Plant that the mould thereby may settle close about all the Roots, and so let it rest.

If the Plants are faire large Plants, in danger to be shaken by

*Distance of
setting.*

the winds, then knock down a stake close to every one, and tye the Plant to it with a *hay-Band*, or some other soft *Band*.

As concerning *distance* in setting young trees I conceive *Tenne yards* is litle enough between *Apple-trees*, and *Peare-trees*, in ordinary soyle. And if men have ground enough to plant, and good soyle, I should rather prescribe to Plant them 16, or 20 *yards* *asunder*, for both Trees and fruits have many great *advantages*, if planted a good *distance* one from another.

(As for Wall-trees they may be planted
5 or 6 yards *asunder*.)

*The 1 Ad-
vantage.*

Such are freed from frettings, & gallings, that happens to Trees that brush, and croud one upon another, whereby not only the *Buds*, *Blossomes*, and *Fruits*, are rub'd and broken off, but also sometimes the *Canker* thereby breeds and destroies boughs, and Branches.

*The 2 Ad-
vantage.*

Secondly (when Trees are planted a faire *distance* *asunder*) the sunne refreshes every Tree, the *Roots*, *body*, and *branches*, with the *Blossomes*, and *Fruits*, where by Trees bring forth *more* *fruits*, and those *fairer* and *better*.

*The 3 Ad-
vantage.*

Thirdly. If *Apple-trees* and *Peare-trees* are planted 16. or 20. *yards* *asunder*, much profit may be made of the ground, under & about the Trees. Yee may plant *Gooseberries*, *Rasberries*, *Curranis*, *Strawberries*, *Roses*, *Flowers*, and all sorts of *Garden stuffe*, commodious as well for sale, as house keeping, which cannot be if Trees be planted *neere* together, as the custome is in most places, the ground being cold and shady by the Trees. Besides the trees would have advantage by frequent digging & stirring the earth about their *Roots* from time to time in setting these things.

*The 4 Ad-
vantage.*

Fourthly. When Trees have roome to spread as before, they will grow very *large* and *great*, and the consequences of that will be, not only *multitudes* of *Fruits*, but also *long* *lasting*; and these two are no small *advantages*, besides all the former. And men are mistaken when they say, the *more* *Trees* in an *Orchard* the *more* *fruits*, for one or two faire large trees, which have roome to spread, will beare more fruits then six or ten (it may be) of those that grow *neere* together, and crowd one another.

It is a very great, and almost a generall Errour, the *Planting* of *Fruit-trees* too *neere* together, especially as to *Apple-trees*, and *Pear-trees*; as for *Cherry-trees*, *plum-trees* and the like, they need not be planted halfe the *distance* I speak of, 5 or 6 *yards* in *distance*

is usually enough, and 8 yards, if the ground be speciall good: for all trees grow much larger in some soyles, then in others.

Concerning Order in setting Trees, though it be not essentiall *Order in setting Trees.* to a good Orchard, yet if men stand upo it, they may measure out a square plot of ground (more or lesse) by a line, and then measure the distance that must be betweene every tree, according to the kinds that are to be planted, and according to the goodnesse, or nature of the soile as hath been said. And having measured exactly the square plot, and the distance of the Trees, then set the foure corners first, then fill up the square plot, on all the foure sides, with plants, ordered as before, and so goe on to fill up all the other places in the Plot, exactly by Line, or by eye, if there be foure or five persons to assist in the work. And by this meanes the Trees will stand in Rowes every way. This square once planted, though but small at first, may be enlarged every way, as the ground permits, or else the Orchard may be drawn out in length, and yet the Trees stand in a right Line every way by this meanes.

In setting all sorts of Trees consider what soile they came out of, whether a fat, and forc'd soile (as divers of the Nurseries about London) or some ordinary naturall soile. If they came out of very good ground, then procure as good or better, if it may be had, though but a little: to lay next to their Roots when they are set againe. This should alwaies be observed. *A speciall rule in transplanting.* To Plant Trees in as good or better soile being remov'd, as that out of which they were taken. For every thing in nature advanced to the better, it is gratefull, and beneficiall to it, but if it be carried to the worse, it is a check, and repulse to nature, and such a one, as that if it be in any great degree, it either much weakens it, or quite destroies it. Therefore chuse Trees out of naturall soyles, and the worse, the better for the Trees, but if they must be had out of rich soyles, then be sure to procure some (more or lesse) of as good, or better, then that out of which they are remov'd, to lay to their Roots, when set againe.

For want of observing this course, many hundred of good plants have been lost from time to time. The well ordering of young Plants the first and second yeare of planting, has an influence upon them many yeares, which if neglected then,

the labour, and diligence of many yeares after; cannot countervail it, the ordering of Cattell while they are young, either makes or marris them, so of Trees, and other things in some proportion; after they have well taken Roote the first and Second yeare, they will then grow in ordinary soyles, the great danger is at first planting.

Wall-trees.

Concerning *Wall-trees*: the *Apricot*, *Peach*, *Nectarine*, *Vine-tree* &c. these and such choice fruit-trees, must be planted upon a *South-wall*, if it may be; The best next that I accompt the *East-wall*, and the *West* not so good, the *North-wall* is nothing worth, as having no advantage by the sunne as the other.

These trees being set (as before is said) they must be plaiht, or spread upon the Wall, being young, (and so from yeare to yeare as they grow greater) with *Nailles*, and *Lethers*. And as they grow larger, cut only some of the superfluous Branches, and twiggs in the middle part, but cut not the utmost sides or top Branches, untill they be spread as large as they should spread and be sure to leade the maine, and biggest Branches, along the sides of the wall, both wayes, and suffer them not to rise straight up as naturally they will, but correct nature by art.

Prune

Wall-trees.

I
in Sommer,

Wall-trees being grown as large as they may be permitted, must be *Pruned* from yeare to yeare; first in *Sommer*, secondly in *Winter*. About the end of *June*, or middle of *July* the *Apricot-trees* (especially) will have put out many large shoots, some of which must be cut off, and others spread up to the wall, where there is roome for them, Tye up as many as you can conveniently with *Lethers*, and *Nayles*; and cut the rest off, that will not so well spread to the Wall, then with a paire of sheeres, or hook, or sharp pruning knife, cut all the forepart of the Trees even, and smooth, as may be, and so cut, and spread the branches as that the fruits, (which by that time will be grown towards their bignesse) may have the sunne to refresh, and ripen them.

2

In Winter.

Secondly towards the begining of *October*, (or so soone as the Leaves are fallen off) the branches that crosse one another or are not well placed, may be rectified; or any of the great boughes, which are grown old, and have but few small branches upon them may be cut off, which must not be cut off in *Sommer* time, lest that too great, and sudden obstruction of

Sap,

lap, kill the whole tree. But the cutting of the small Branches in Sommer, is some small check, and stop to the sap, and hinders the excessive rising of it at that time, which else would spend it selfe in large *superfluous branches*, and so rob the fruits: And besides, as that cutting conduceth to the *fairnesse*, and *early ripening of the fruits*, so also it causeth *multitudes of Branches*, and *Buds for blossomes* the next Spring, but this *winter Pruning* is chiefly for the well ordering of the branches that could not be well placed (by reason of the *Fruits & Leaves* in Sommer-time) and for the cutting off of greater Branches, when need is.

It is a great errour amongst some, who suffer all the young, & large Shoots to grow as much as they will, all *Summer* without cutting, and then in *Winter* they usually cut all or most of them quite off from the trees, and preserve only the old stumps, or biggest Branches of the trees, and by this meanes in the middle part of the Tree, and neere the Root, there are few, or no young Branches, to be seene: Whereas they should preserve the young Branches to spread up against the wall, untill it be full of small Boughs. And then some young Shoots (every yeare) may be cut off in Sommer, as before.

*Errour in
Pruning.*

And in cutting away Branches, be sure to take those away that grow the straightest out, and will not so easily be bowed to the Wall, as the other: And preserve branches as low, and as neere the ground as may be, and cause them to bend, and grow straight along the sides of the Wall both wayes; and suffer not the biggest Branches to rise straight upward, as (commonly most doe) but naile them downwards.

As for great Trees in the Orchards, Fields, Hedges, &c. they Pruning old must be Pruned from yeare to yeare, as need is, in *October*, *November*, or thereabouts: observe to cut off the *superfluous Branches*, such as crosse one another, and such as grow too close, so as the *Sunne* cannot well come about the bearing Branches: Leave no dead *Twigges* or Branches; and scrape off the *Mosse* that is upon the *Body*, and great Branches.

Opening the Roots is profitable to some Trees, especially such as grow upon dry, and barren grounds. In *October* (or thereabouts) take away the Earth round about the Roots, a yard broad, or more, and so leave the Roots bare, and open all *Winter*; that the *Raine*, *Snow*, *beames of the Sunne*, &c. may refresh the

*Ordering the
Roots of old
Trees.*

the bottome Roots, and make the ground better: At Spring fill up the holes againe.

Also to lay *Pigeons dung*, *Hens dung*, *Sheeps dung*, to the roots (or the like stuffe, that is very hot, and fertill,) will much help the *Trees*, and make them beare store of fruits; *Vines*, or other *Fruit-trees*.

So also of *Lees of Wine*, the washing of strong *Beere-Barrels*, *Blood of Cattle*, dead *Dogges*, *Carrion*, or the like, laid, or put to the *Roots of Trees*, when opened (as before) is found very profitable unto fruit-bearing.

But in case the *soyle* about the *Roots* be over fat, and fertill, it may hinder bearing, for it will cause *Trees* to shoot forth great large shoots, and to send forth broad *Leaves*, and but little fruit: if so, then take away some of the fertill *soyle*, and put in, instead, sand, or cole ashes, or any stuffe that is barren, that it may dry up, and abate some of the too full feeding that the *Trees* had, and so cause fruitfulnessse. Though Meat and Drink be never so good, & wholesome, yet *excesse* hurts the body.

And further observe: That *Mowing of Grounds* yearely, where *Fruit-trees* grow, is exceeding prejudiciall to *Trees* in respect of bearing (unlesse the *soyle* be exceeding fertill) But *pasturing of Orchards*, and *Grounds* where *Fruit-trees* grow, is observed to be of great advantage to their prospering, and bearing *Fruits*. When *Cattle* are suffered to lye, and pasture under, & about the *Trees*, they much benefit the *Roots*, by their warmth in sitting, and by their *soyle*, which soaks down among the *Roots*, and is a great refreshing to them, as hath been found by cleare *Experience*.

Therefore permit *Cattle* (if it may be convenient) to lye, & pasture, under & among *Fruit-trees* (after they are grown strong, & out of their reach) save only at those seasons when *Fruits* are ripe, because rubbing against the *Trees* would shake down the fruits, and spoil them. And it were better they did not rub against the *Trees* at any time, for in that respect they may doe hurt, therefore set *Stakes* or *Posts* about the *Trees* for the *Cattle* to rubb against, whereby the *Trees* may be preserved.

And concerning *Transplanting*, *Pruning*, and *Ordering the Roots of Trees*, thus much. See further, *Errors in Practise*.

Diseases incident to Fruit-Trees.

FRUIT-trees are subject to divers *Diseases*. *Baptist. Porr. saies, Affliguntur Planta omnes, veluti Animalia, diversis morbis.* All *Trees or Plants* are afflicted with divers *Diseases* as sensible creatures. And therefore we should apply our selves to *Cure* them, not for pitty to the *Trees* (as the indulgent compassionate *Manichees*) but for our own profit.

De cultu &
instit. l. c. 35.

I shall (at present) mention only *three Diseases* that sometimes happen to *Fruit-trees*. *Mossiness, Bark-bound, and Canker.*

Concerning *Mossiness* of *Fruit-trees*, the way to cure that (and other *Diseases*) is to take away the Cause, *sublatâ causâ, tollitur effectus*. If the spring be stopt, the streames cannot runne. *Mossiness.* Some to cure this, only scrape off the *Mosse*, not indeavouring to take away the Cause, so that in a few yeares they are as bad againe, that's but like endeavours for cure of the *Tooth-ach*, or *Gout*, or the like, with some outward applications (which though they may give some ease for a while, yet they strike not at the root, they remove not the Cause, and therefore they returne againe. So that it must be considered what the Cause of *Mossiness* is, sometimes it is caused by over coldnesse of the ground, as in *wateryish, and clay grounds*, likewise by *Barrennesse* of the soyle.

If it be *Coldnesse* through moysture, then use all means to lay it dryer, by trenching the ground: or if it be *Clay-ground*, then bring in some warmer soyls to mixe with it, as *Sand, Ashes, Sheepsdung, Pigeons, or Hens-dung*, or the like: If the soyle be too barren, then help it by mixtures of good soyles, round about the *Roots*.

But withall take away the *Mosse* that is already upon the trees, in this manners after Raine rub it off with a *Hasre-cloth*: else scrape it off with a piece of hard wood in the forme of a knife.

Another is the *Bark-bound disease*: This exceedingly hinders the growth of trees: it makes them live lingeringly and poorly: This happens when there is but a dull, and slow passage up of sap, and in small quantity, either by reason of barrennesse of soile or want of due culture, to the Branches, therefore if the soile be barren, it must be mended, and likewise some of the Branches cut off, and the rest scored downe all along

²
Bark-bound.

to the Root, through the bark, on each side, with some crosse cuts, and nicks in the bark: let this be done in the spring time, & the sap will arise more plentifully.

3
Canker. Another disease is the *Canker*, naturall to some, but accidentally hapning to others by bruises &c. This hurts many, and spoiles some. To cure it, cut it out, if it be upō the body, or great Boughs of trees, & then cover the place with clay mixed with horse-dung and cut off the small Branches that are dead, but withall endeavour to stop the fountaine, and cause of it, (being a sharp and virulent sap) by laying *Cote Ashes*, or *ashes of burnt wood*, *Nettles*, *Ferne*, and such like vegetables to the Roots, but if the Trees grow upō gravell ground they'l hardly be cured, without altering the soile in a great measure.

2
Mischiefs incident to fruits. Secondly, concerning *Mischiefes incident to Fruits*: by *Caterpillers*, *Ants*, *Erewhigs*, *Snails*, *Wasps*, *Birds*; and cold, and strong Winds.

1
Caterpillers In the spring time *Caterpillers* breed (and devour many buds, blossomes, and young fruits, especially in a dry season:) of the *Dew and Leaves* (as one saies) when the East Winds blow much, which causeth that moist and slimy matter to vivifie. They breed also (as is observed) of the *Spawne of Butterflies*. Now how to destroy them. I know no better way then to pluck off those leaves which have the *Cobwebs* made upon them, (in which they breed) and tread them under foot, for one of them contains multitudes.

L. Bac nat. hist.
pag. 182.

And for those that escape, being upon the Trees, some smoake them with straw or such like, which makes them fall off. They may be destroyed also by squirting water up into the Trees among the Boughs, which washeth them off.

2
Ants. Secondly, *Ants* and *Pismires*, hurt Fruits, multitudes creep up into some Trees, and eat the Fruits. Therefore seek out their hills where they breed, and lye, and powre in *scalding water*, amongst them till they be destroyed.

Or else anoint the bottome of the Trees neere the Root with *Tarre* round about, that so these little theeves may be taken Prisoners by sticking in it.

3
Erewhigs. Thirdly, Fruits (growing ripe) are sometimes eaten with *Erewhigs*. One way to destroy them is by setting Oxe hooves, Canes or any hollow thing neere the Roots of the Trees, and among the Boughs,

Boughs, upon the ends of sticks, and they'l creep in, and lye there, then take off these hoofes quickly, and shake them into a boule of water, or crush them with your foot upon the ground.

These Creatures doe most *mischiefe* to Wall-trees, especially upon old walls. Pick them off betime in the morning & destroy them. But if you keep the wall well pointed with lime, that they have no harbour there, and the Roots cleane from weeds you'l not be much troubled with them. 4

Another *mischiefe* incident to fruit, is by *Wasps* and *Hornets* sometimes, some find out their nests, & are so bold as to destroy them there, by scalding water, or some other way. Another way to destroy them is by hanging Earthen Pots halfe full of water in Trees, dawbed in the inner side with hony, and they will leave the fruits and fall to the hony, and having suckt of it, they fall into the water, and perish. This way destroys multitudes. 5

Birds also spoyle *Buds* and *fruits*: the Bul-finch and Lennet in the Winter time and Spring eat up multitudes of *Buds* of *Cherrie-trees*, and *Plum-trees*, which are prepar'd for blossomes and fruits, being ripe they peck and eat many: You may destroy them by setting lyme-twigs (with baits) in the Trees, & kill some with a Peece or Cros-bow, and hang them in the Trees? Also Clack-Mills may be set in divers places in the Orchard which wil affright them. 6

But the greatest *mischiefe* incident to fruits is by cold winds: and Frosts in the spring time, & by strong winds in sommer, & Autumne: which shake off the Fruits: against the hurt of cold winds, & frosts, wall-trees may be covered, for a certaine time while they are knitting (being exceeding tender) and great standard trees may be smoked in knitting time, setting on fire some moist straw, (or any thing that will make a smoke) under, and among the Trees. 7

Also against strong winds, the Orchard must be defended (if it be possible) with some high Trees, on the North, East, and West, sides, or so planted that they may have houses, hills, or something, or other, to break off these winds, from the Fruit-trees.

Soe much concerning *Diseases*, and *Mischiefes*, incident to *Fruit-trees*, and *fruits*: with their *Cures*, and *Remedies*.

The Alimentall and Physicall use of Fruits.

Fruit-trees being Planted, and duly Ordered to fruit-bearing, then comes the joyfull Harvest, the *End* of all our Labours: And then we make use of all the Fruits for our greatest Profit. and because some have ways to order fruits for advantage, which others know not of, I thinke good to say something concerning the use of fruits, in respect both of their *Alimentall*, and *Physicall Use*.

Of Apples.

First concerning the use of *Apples*.

When *Apples* are ready they may be Disposed of Divers wayes, some for *Syder*, others for *Sale*, others for daily *Dishes to the Table*.

Syder is usually made of such *Apples* as are moist sommer fruits, some are fit to make *Syder* so soone as they are gathered, others may lye a certaine time to mellow as they use in some places, whereof most excellent *Syder* is made if the *Apples* are taken when they are just ready, and fit to eate, being the crude, or raw spirit is then digested.

How to make Syder.

The *Apples* being ripe, gather them, & being cleane picked from Stalks and leaves, grind them in the Mill, or pownd them small in Trows of wood, or stone, then straine them, & tunne up the Liquor, immediately, & let it not stand as some do, it looseth spirits: And having filled a Vessell great, or small, take *Clay*, and lay it round about the Tunne hole, not to stop it up, but make it hollow round about, to containe so much *Syder*, as that (when it hath done working) the Vessell may yet be full, put in a small quantity of *Mustard*, to make it worke the better, and when it hath done working then stop it up presently, very close, and it will keep better then if the Vessell were not full.

In drawing of it, give it no more Aire then needs must.

If you hang divers kinds of *Spices* (bruised) in the middle of the Vessell, in a thin Linnen Bag, they give the Liquor an excellent relish: put it not in, till the *Syder* have done working.

If you boyle *Syder* (with spices) newly strayned, such will be cordiall, you may colour it with juyce of *Mulberries* or *Rasberries*, or of the *Great-bearing-Cherry*, and make it like *Claret-wine*.

How to keepe Syder.

Syder may be kept perfect good many yeares if (being setled)

it

it be drawn out into *Bottles*, and well stoppt with *Corks* and *hard wax* melted thereon, and bound down with a *Packebred*, & then sunk down into a *Well* or *Poole*, or buried in the ground, or sand laid in a *Cellar*.

Before you gather *Apples* to keep, let them be ripe, which may be known by the *colour*, and by the *seed*, cut some of them, and if the seed be turn'd *browne*, or somewhat *blacke*, such may be gathered; gather them in a dry day, pull them one by one, and put them into *Baskets* lined with woollen cloath, that they bruise not. Carry them into a *Loft* or upper *Chamber*, and lay them on *Mats* or *Boords*, not on *Plaister*, or *Clay Flowers*. Lay them thin, not on heapes, as some doe, let the windows, and holes on the *South side* be all shut up, but open especially upon the *North side*, in dry daies, that the ayre, and winds may dry up their superfluous moisture. Lay every kind by themselves, and pick out all the *Leaves*, and such as rot, from time to time. Turne them sometimes, and in *Frost* cover them with *Mats*, *Straw*, or the like.

How to keepe Apples.

If *Apples* offend any through winde, eat with them *Ginger*, or other *Hot spices*, or *Carroway seeds*, *Fennell seeds*, or the like. So *Dodonæus*: *Quorum malignitas vel aromatis, vel aliis corrigi potest.*

Hist. stirp. l. 3. pag. 777.

Apples are prepared for the *Table*, all the yeare long many waies (I shall not need to speak of particulars) and are pleasant and healthfull to the body.

Dulcia pomaminiis frigida sunt, ac humida alimentum conferunt amplius quam cetera poma. He saies, Pleasant *Apples* are lesse cold and moist, and afford more nourishment then others.

Dodon hist. & l. 3. p. 10.

Concerning their *Physicall use*.

De Aliment. facul. l. 2. p. 20.

Gallen ascribes heat to some kind of *Apples*, he speaks of their *Physicall properties* in relaxing the belly, & saies the *acid & acrid* performe this: but with some difference. *Hæc cum calefactione, Illa autem cum refrigeratione.* The *Acrid* doe it with heat, the other with cold. *Sweet Apples* relax the belly more then other kinds. A good Author saies, every *sweet thing* detergeth & relaxeth And therefore *Peares* (which are generally more sweet then *Apples*) loosen the body more then *Apples*.

Apples also help *Concoction*. So *Gallen*, post cibum statim dare ipsa, &c. taken after meat. *Nonnunquam autem cum pane, ad ventriculum & stomachum roborandum.* eaten with bread they strengthē the stomach. So *Avicen*: confortant debilitatem stomachi.

D Alim. facul. l. 2.

L. 2. c. 569

In Com. pr. l.
Dioscor.

Galen saies pleasant Apples are profitable in hot diseases. *Sape in morbis afferunt præsidium*: So *Matth: Pomum coctum non solum sanis competit, sed etiam agris*: He saies they are Cordiall to persons in hot diseases: *Calidis cordis affectibus succurrunt*. Being roasted, and eaten with Rosewater and Sugar; and that the pleasanter kinds are helpfull against *Melancholy*, & are good against the Plurisie, if roasted and eaten *Glycyrrhiza succo, & saccharo, mirifice juvant*. With iuyce of Liquorice, and sugar, morning and evening two houres before meat, they wonderfully help.

Obserue one speciall Physicall propertie more of Apples, set down by a Learned and experienced Author. These be his words.

Ger. Herb. pag.
1270.

The pulp of roasted Apples foure, or five (if Pomewaters) mixed in a Wine Quart of faire Water, labourd together, and drunk at night last, within an houre, doth in one night cure those that pisse by drops, with great anguish, and dolour, the strangury, and all other diseases, proceeding of the difficulty of making water, but in twice taking, it neuer sayleth in any: also the running of the Reines: which I have often proved, and gained thereby both Crownes, and credit. So the Author.

Of Peares.

a Lib. 2. de A.
liment. fa. p. 20.

Concerning Peares: a Galen saies they have like properties with Apples, and what is said of Apples, if we attribute the same to Peares, there needs nothing anew to be said of them, *Quæ de Malis diximus, si ad Pira transtuleris, nihil erit quod nos de ipsis novum dicere oportet*.

b Lib. 2. ch.
543.

c Hist. stirp.

3.

* Li. 2. Ch.
548.

Avicen saies: *sedant Choleram*, they mitigate Choler. c *Dono* commends them above Apples, for their nourishing propertie: *Alimenta Pira omnia, amplius & copiosius quam Mala conferunt*.

So * Avicen: *Humor eorum plurimus, & laudabilior est, humore pomorum*.

Ma. Rust.

Peares make an excellent Wine being well ordered. A late Author saies we might have wine of Peares and other of our Fruits, not inferior to French Wines. And another tells us, that a famous Physician of his time was not content to equall them with Wine of Grapes, but preferred them before it in every thing.

I need not tell Herefordshire, and Worcestershire men, the good properties of Perry & Syder, they know by experience it is both Alimentall and Physicall, that it is profitable not only for Health, but also for long life, and that Wines made of the best kind of Apples

Apple, and Peares, is a speciall Cordiall, chearing and reviving the spirits, making the heart glad, as *wine of Grapes*.

And it has beene observ'd that those who drinke *Syder* and *Perry* daily, or frequently, as their common drinke, are generally *healthy persons*, and *long-lived*.

And that it will begger a *Physitian* to live where *Syder*, and *Perry*, are of generall use.

Quinces are speciall fruits, and of manifold use, not only for daily nourishment, but also for *Physicall* respects, either of themselves, or mixed with other fruits. *Matthiolus* commends them both for *meate*, and *medicine*, boyled with hony. *Ex melle tantum & Cotoneorum carne confecta, tam ad cibi quam medicamenti commodum*.

Of *Quinces*.

Com: in lib. 1
Dioscor: pag. 201.

So *Rovilius*: And that many dainties for Banquets are prepared of them: *Multa ex Cydoniis malis parata ex iis sectis & diutius in aqua elixis donec tabescant &c.*

Hist: plant: lib. 3. pag. 290.

There are divers waies of making *Marmalade of Quinces*, which is knowne to be a good *Cordiall*. strengthening the *Stomack*, and *Heart*, both of the sick, and sound.

Galen saies being made with Hony it will last seaven yeares, and loose none of it's properties, *diu duret, si quis ipsum cum melle coctum asseruare velit, post annos septem inuenimus nihil in qualitate immutatum*.

De Alimenti
facul: lib. 2.
pag. 20.

Dodonaus saies: they bind strongly, of their owne nature; and stay vomiting. *Valde astringunt, ventriculum roborant, vomitum sedant*.

Hist: stirp: lib. 3. pag. 784.

Quinces may be kept good a yeare or (as some have said) two yeares, thus: put them in a Barrell, cover them with *Penny Ale*, and once in 10 or 12 daies draw it off, but stirre not the *Quinces*, then put in fresh *Ale* againe, from time to time, this is accompted far better then usuall *Pickle*. Others keep them thus: Boyle the parings and Cores of *Quinces* with salt and *Ginger*, and in this pickle they'l keep diuers Monthes, A late Author saies there's no fruit in this Land of so manifold use as *Quinces*.

Cherries are a healthfull and pleasant fruit, *Ruelius* saies *Cerasa bonum succum creant*, they breed good humours in the body; so another: *bonum sanguinem generant*.

Of *Cherries*.
De Nat. stirp
ch. 64. lib. 1.

Dudonew accompts the *sour*, and *sharp Cherries* best, *Inter Cerasa optima sunt acidula*.

Thereis

There is a pleasant and refreshing wine, made of *Cherries*, in Countries where they have great store, both of their Lyquor only: and the same mixed with *Grapes*. *Uvis maturis admiscetur, & deinde vinum ex his paratur gustatu gratissimum*: Doubtlesse *Cherry wine* in sommer is a pleasant and healthfull lyquor, more proper for that season then hot wines.

Cherries boyled in brothes, and drinks, give a pleasant relish, and are good for hot, and feverish bodies. And in Countries where there are great store their custome is to eat their breakfasts of *Bread, butter, and Cherries*.

The Schoole or Universitie of *Salerne*, gives them great commendations, and tells us divers commodities they afford:

*Cerasa si comedas tibi confert grandia dona,
Expurgant Stomachum, nucleus lapidem tibi tollis,
Et de carne sua sanguis eritq, bonus.*

By eating *Cherries* great good doth arise,
To such as use them, for the learned wise
Say, that they purge the Stomack, and beside
The broken stones and kernels have beene try'd,
To breake the bladder-stone, breed wholsome blood,
To fat and feede the body they be good.

Another saies, they increase and comfort the *Liver*, and that the tart and sharp close the mouth of the stomach, and make the better and speedier digestion.

Com: in l. i.
Dioscor. pag.
198.

Matthiolus saies: *Omnia refrigerant, roborant, & tibi appetentiam excitant, ideoque febricitantibus, ac sitientibus facile conceduntur à medicis Germanis.*

¶ All *Cherries* do coole, strengthen and stirre up appetite to meate, and therefore they are readily allowed by the *Germane Physitians* to such as have feverish, hot, and thirsty diseases; other Authours say the like which for brevities sake I omit.

Of *Plums*.

Com: in l. i.
Dioscor. pag.
206.

Matthiolus saies, *Præna bilem deiciunt, proinde ea utiliter, medici ad febres, aliosque biliosos affectus reddant.* *Plums* cast out cholerick humours, and are good in fevers, and other cholerick and hot diseases.

A late Authour saies, out of *damsons* and other sweete *Plums*, may

may be made a drinke not inferior to some good wines, and abundance of *Aquaviva*.

Schol. Sal. saies :

Infrigidant, laxant, multum prosunt tibi Pruna :

Plums coole, and loose the belly very kindly :

No way offensive, but to health are friendly.

Many good dishes for the Table, and delicates for Banquets, are made of *Plums*, with hony, and sugar, to use all the yeare, and profitable both for the sick and healthfull.

Gallen accounts *Aprerocks*, better then *Peaches*, *Non in ventriculo, ut illa corrumpuntur*: because they are not so soone corrupted in the stomach. *Avicen* saies, *Infusio siccorum confert febribus acutis*: The infusion of dryed *Aprerocks*, is profitable in sharpe feavers. *Matt.* tells us, that the Oyle of the Stones, is very profitable to anoint the heat, and swelling of *Ulcers*, and Sores, and Paines in the Eares. And that the oyle mixed with wine, and drunke, drives stones and gravell out of the bladder and kidneys; and helps the collicke.

They are ordered many wayes and all pleasant to the Body, and healthfull.

Dioscor. sayes, *Persica mala stomacho utilia sunt, alvum quoque bonum praestant*. *Peaches* are good for the stomach, and keep the belly soluble: so *Avicen*: *Matura sunt bona stomacho*.

Lonicerus saies, *Persica mala in ardentibus febribus sumi possunt*. *Peaches* may be eaten in burning fevers.

Pliny comends *Peaches* as much as any fruit even for the sick, with wine or Vineger, *Poma Persica innocua expeti agris, utiliora q̃ cum vino aut aceto, &c*:

Peaches eaten moderately (for so wee are to use all fruits) are no doubt profitable to coole and loosen the belly, especially for hot constitutions; but with all take the advice of *scho*: *Sal*: *Persica cum musto, vobis datur ordine iusto*: take a cup of wine, or strong drinke with them.

Some make a drink or wine of *Mulberries* as *Albert*: *Magnus* tells us: *De Moris sit potus, qui Moretum vocetur*. A Spoonefull or 2: of this will colour a quart of white wine or Syder. *Kuel*: saies, *succus siccato pomo expressus, multum obsonicrum saponi confert, & miram gratiam commendat*: the juyce of *Mulberries*, prest out, and dryed, & put into meats, gives them a very pleasant taste & relish.

Of *Aprerocks*
De Facult. Ali
men. l. 2. p. 20.

Can. l. 2. c.
146.

Of *Peaches*:
L pag. 80, &:

L. 2. 571:
Nat hist. p. 15.

L. 15. c. 12. & l.
23. c. 7.

Of *Mulber-*
ries.
De veget. &
Plant.
c. 26. p. 157.
De nat. stirp.
c. 102. p. 265.

The *Juyce of Mulberries* is known by experience to be a good remedy for a sore mouth, or throat, such as are perfectly ripe relax the belly, but the unripe (especially dry'd), are said to binde exceedingly, and therefore are given to such as have *Lasks*, and *Flixes*. *Dodonæus* saies they stir up a languishing appetite, especially in hot bodies, *appetentiam calore languentem excitant*.

Can. l. 2 c. 498. So *Avicen*: *appetitum cibi faciunt*. They are used by Apothecaries for many other purposes.

Of *Figgs*.

Nat. hist. l. 3.

p. 900.

Com. in l. pr.

Diol. p. 230.

Figgs are said to nourish much, and to breed store of blood. *Dodonæus* preferres them above other Fruits in respect they nourish very much: *Alimenti amplius quam ceteri prebent*: So *Mat. Ficus* & *uva* inter fructus autumnales principatum obtinent.

We have a sort of *Figgs* that come to perfect ripeness in England, which are eaten (being newly gathered) with *Popper*, *Salt*, and *Bread*, and may be dry'd to last all the yeare. And (doubtlesse) nourish exceedingly.

Lonicerm saies: *Naturam confortant*. *Discor*: commends them as profitable to those who have lost their colour by long sickness.

Li. 23. c. 7.

Figgs according to *Pliny* are restorative, and the best thing that they can eat, who are brought low by languishing sickness and on the mending hand, they help (as another saies) an old continuall *Cough* (being boyled with *Hyssop* and drunk) also *Obstructions*, and other faults of the *Lungs*. *Scho: Salern*: commends them for divers things: *Scroba, tumor, Glandes*,

Ficus cataplasmata cedit.

Iunge papaver ei, confracta foris tenet ossa.

Kings Evill, Swellings, Kernells,

Figgs by a plaister cure:

Add *Poppie* to 't,

Then broken bones it sets them sure.

Of *Medlers*.

Hist. stirp. l. 3.
p. 789.

De Al. facul.
l. 2. p. 21.

Condiuntur hi cum saccharo, aut melle (as *Dodonæus*) *quo modo appariati ori, ac palato grati sunt*. Ordered with honey, or sugar they are acceptable and pleasant to the tast, they fortifie digestion, and preserve the humours from putrefaction. They stay vomitings and looseness of the stomach or belly. *Valentius* *astringunt*, proinde *ventri fluenti cibis est utilisissimus*: as *Gallen*: Another saies: *Mc'pilorum officula in pulverem contrita calculos è renibus valenter pellunt*. The kernells bruised to dust, and drunk in liquor (especially

pecially where Parsley roots have been steeped) doe mightily drive out stones, and gravell from the Kidneyes.

A late Author saies *Medlers* are singular good for women with child, seeing they strengthen the stomach, and stay the loosenesse thereof.

Another saies, they are very effectuell for women with child against abortion.

A late Author saies the profit of *Wallnuts* is infinite: They are usually eaten after meales to close up the stomach, and help digestion. And according to *Avicen*, *recentes sunt meliores stomacho*. Bread or Bisket may be made of the meale being dried. The young nuts peeled are preserv'd, and candid for Banquetting stufte: and being ripe the Kernells may be crufted over with sugar, and kept long.

Of *Wallnuts*.

Can. l. 2. c. 501.

Avicen saies: *Juglans ficubus, & Ruta medicina omnibus venenis: Wallnuts, with Figs, and Rue, is a preservative against all poison,*

Can. l. 2. c. 501.

Schol: Sal: reckons Wallnuts for one of the six things that resist poyson.

*Allia, Nux, Ruta, Pyra, Raphanus cum Theriaca:
Hac sunt Antidotum contra mortale venenum.*

*Garlicke, Rue, Peares, Radish, Treacle, and Nuts:
Take these, and then no deadly poyson hurts.*

Mithridates the great: his preservative was (as is recorded) Plin: nat. hist. Two Wallnuts, two Figs, 20 leaves of Rue, and a grain of Salt stamped together: which taken, no poyson that day could hurt him.

l. 23. c. 18.

Greene Walnuts about Midsommer distilled and drunk with vinegar, are accounted a certaine preservative against the Pestilence.

The milk of the Kernells (as Almond milk) doth cool and refresh the appetite of the languishing sick body.

So much for the Alimentall, and Physicall use of Fruits.

Errors Discovered.

HAVING shew'd some profitable Instructions in this *Art of planting Fruit-trees*, I think it convenient likewise to discover some *Errors* that I find both in the *Theory*, and *Practise* of it, that men may take heed of them.

Agust. de civ.
Dei, l. 19.

Adv. of Learn.
l. 1. p. 45.

Let not men think that *Ancient and Learned Authors* have discovered all *Truths*: or that all they have said is *truth*: they are but men and have their *Errors*: *Humanum est errare: quandoq; bonus dormitat Homerus*, as one saies, *Non est pro magno habendum quid homines senserint, sed qua sit rei veritas*. It's not any great matter what men have thought, but what is the *truth* of the matter. *Quid ad nos qui potius de rebus ipsis judicare debemus?* What is it to us what men say, who ought rather to judge of the things that are spoken. *Oportet edoctum judicare*: as *L. Bac.* saies. Men that are taught must not resigne up their Reason to their Teachers, but judge of what's said.

Adv. Learn.
p. 154.

Some great and Learned Authors have asserted very weak things, and altogether untrue. *L. Bac.* saies concerning them, *That the writings of speculative men upon active matter, seemes to men of experience, but as dreames and dotage*. Indeed they goe about to build *Castles in the Aire* (as the Proverb is) for as a building cannot be set up without a foundation, so neither can effects be produced without *Causes*: *Nullus effectus datur sine causa*. They tell us of many great and desirable things, but when they come to discover the *Causes*, and *meanes* whereby they must be effected, these are (many of them) weak and childish: and which (I suppose) proceeded from them upon their first apprehensions without waighing them in the *Scale of Reason*, or trying of them by the *Touchstone of Experience*. And as the *L. Bac.* saies *These high and vaporous Imaginations, instead of a laborious, and sober enquiry of truth, doe beget hopes, and beliefs in themselves, of strange and impossible shapes*.

Nat:hist: p.
165.

And elsewhere he saies. *The Causes and Axioms of some ancient, and moderne writers, are so full of Imagination, and so infected with old received Theories, as they are meere Inquinations, (or defilements) of experience*.

And these he ranks amongst the discredits of Learning, he saies

saies: *Many things have been rashly (and with little choice or judgement) received, and registred, as appeares in the writings of divers Authors, which are every where fraught with forged and fabulous reports, and those not only uncertaine, and untried, but notoriously untrue, to the great derogation of Naturall Philosophy, with grave and sober men.* Advanc. Lear. l. 1. p. 32.

I shall therefore discover some of these *Errors* (according to my apprehensions) as they concerne this *Art of Planting. Fruit-trees*, that inexperienced persons may not be deceived by them.

And afterwards shew some *Errors in the Practise* of this *Art*, that they may be avoided.

I shall divide the *Errors in the Theoric (or contemplative part)* of this *Art*, into three sorts.

The first sort are, *Instructions hurtfull and dangerous.*

1

The second are, *Instructions for effecting of some things impossible to be done by the meanes prescribed: and others impossible to be effected by any meanes.*

2

The third sort are: *Assigning wrong Causes to Effects.*

3

For the first.

A late Author giving *Instructions for Grafting*, saies: *Graft the next Spring after remove.*

1

This I say is a *dangerous Instruction*, because *Stocks* removed have so great a wound and repulse by removing only, that they cannot well beare another so soone after, so great as *Grafting* would be: Therefore let *Stocks* removed grow a yeare, or two before *Grafting*, *Reason*, and *Experience* is cleare enough in this.

Secondly *Theophrastus* giving instructions for *Planting*, saies: *Take away none of the Roots for it is a foolish thing to loose those roots we have, that we may get new.*

2

This is a *hurtfull and dangerous Instruction*, for except many of the small strings, and roots be cut away, and all the ends of the great ones, they will not put forth new *Roots*, as they will if cut; and multitude of roots hinder the mould from closing on every side of every *Root*, as it ought to doe, therefore some must be cut away, and the ends of all that are left; *Experience* prove this sufficiently.

3
Columel. lib,
de Arboribus
cap. 26.

Thirdly: *Columella* giving instructions for choice of Grafts, this is one, *surncli sint bisulci*. Let Grafts be double, or forked. So *Ruelius*.

This is a dangerous and hurtfull instruction, because forked, or double or treble Grafts, most of them dye, and those that live grow poorely, not a fifth, or sixth part (it may be) so much as single and short Grafts.

4 Fourthly: *Bapt. Port.* giving Instructions for choice of Grafts, saies, we must take *surnculos pregnantes & turgentis*: Grafts full & swelling with sap. This is a bad Instruction: For Grafts should be taken before they swell with sap, for it is a repulse to Nature to cut them after sap stirres in them: neither will such take hold on the stock so soon as those which are indigent, and needy of sap: therefore let Grafts be cut from the Tree, before sap stir in them.

5 Another saies. When Grafts put forth, take away the Clay: for Clay rather keeps moisture then drough, save a little in the hole. This is a hurtfull Instruction: for sap will not cover the head of the stock, nor close up the clefts on both sides so soon without Clay, as with it, Clay is as salve to a wound, which heales it up: & it rather keeps out moisture, then otherwise, if wel closed, and also preserves from dry winds, sunne, & other annoiances, therefore keep on the Clay a yeare or two, till the head of the stock be covered and the cleft healed up.

6 Another saies: When the Grafts have well put forth, underprop them, else wrap them one within another, and tye them with wood amongst, for feare winds break them. This is a very hurtfull and dangerous Instruction, for all these wayes do fret, & gall, the barke and (it may be) breed the Canker, And besides, it hinders the yong grafts that they cannot spread into an handsome form: this course brings a certaine mischeife to prevent an uncertaine: winds hurt but few, except they be very top-heavy, if so; then cut some of the branches till they be grown stronger below, able to bear the Top.

7 Some Authors counsell, us to cast Glee into the place of Grafting, to glew together the two substances, or sprinkle Sugar, Cinnamon, or sweet liquor, that the fruits may retain the taste. This is a hurtfull Instruction because liquors (or any other substance put betwene the stocke, and the Graft, do hinder, (if not spoyle) the joyning of stocke and Graft, but if this might be done without hurt either to stock, or Graft, yet would it be no way effectuell for the End proposed.

A late Author saies: *Plant not against a wall, because a Tree cannot be so long lived nor grow to the bignesse it else would do.*

This is a hurtfull Instruction, because many kinds of fruittrees, As the *Aprcock Peach, Nectarine* and divers other trees, will beare little, or no fruit, except they be planted against a wall: And though it be granted, that Trees planted against a Wall will not be so large as if planted from the Wall, Yet I suppose its better to have, a few small trees, that beare store of great fruits; then store of great Trees, that beare but a few small fruits.

Columella, giving Instructions for removing Plants saies. *Ma-* 9
la aestiva, Cydonia, sorba, pruna, post mediam hyemem usq; in Idus L. r. de Ar. par
Febr: seriso: Pyros Autumno, aut brumam seriso: Plant the Som- 490.
mer Apple, Quince, Service-tree, and Plum-tree, after winter, in february: but Peare-trees before winter.

This is a hurtfull instruction, as to the first part: for Trees should be planted in Autumne, as has been said, and there is the same Reason why the Sommer Apple-tree, and the rest, should be planted before winter, as is for Pear-trees. see at larg: pag. 60, &c.

One adviseth thus: *Let the Orchard be seated on some hill top, rather then on plaine grounds, for they have better Aire, and better prospects, and also containe a greater number of trees then plain grounds.* 10

This is no good Instruction: for Orchards on low and plaine grounds have many advantages of those on high grounds, for the soyle of plaine, and low grounds is commonly more fertill then hill tops. Secondly, low grounds are more safe from Winds then hills, by reason of other trees planted to secure the Orchard, and by hills, houses or other shelters: hill tops can have no defence. As for prospects on hill tops, men do not plant Orchards for prospects, but for Fruits.

And as for good Aire, I suppose there is better Aire (especially at some seasons) in the Orchard on plaine grounds, then on hills, for in Blooming time, winds would deprive us of the sweet aire on hill tops, but on plaine grounds the aire is more calme, And the perfume of the Blossomes staves within the Walls, as within a perfumed Chamber.

Another Author saies: *Set the stones of the Peareplum a foot deep in cold ground.* This is a hurtfull and dangerous Instruction. For 11
stones

stones of any Fruits in any ground, put a foote deepe, are rather *buried then set*, for a man should nere see more of them. But set stones of any fruits not about two inches deepe, rather some thing lesse.

- 12 One giving *Instructions for Inoculating*: saies, *Take off the bark iust upon some Bud, or knob, and set the other Barke thereon.* This is a *hurtfull Instruction*: for if the *Bud* to be inoculated be set upon another *Bud* of the stocke, then the *Inoculated bud* cannot possibly close, unlesse the roote of it be out, and if the roote be out its spoyl'd that way: The Author that talks thus had never any experience in the *Art of Inoculating*. For Buds must be set upon the *smootheest part of the stock*, that they may be sure to close.

- 13 Another saies: *Set Apple-trees Twenty foot asunder.* This is a *very hurtfull and dangerous Instruction*, and the practise of it hinders men of multitudes of Fruits, Wee see that in most Orchards, Trees are planted too neer togeather, it may be *six or seven yards* asunder, which is too neer togeather: I conceive 10. or 12 yards or thereabouts, little enough for the distance of *Apple-trees* in ordinary soyle: but in very good ground 16. or 18. yards or more, for we see by experience that upon good ground and well ordered they will go neere to touch one another at 10. or 12: yards, or a greater distance: And that a few *Apple-trees* having roome enough to spread will beare more fruits, then five times so many, being crouded one upon another, where they have not roome to spread. And besides, those fruits they beare cannot come to perfection, neither in bignes, nor ripenesse, for want of the sunne which cannot come about them when the Trees are planted so neer togeather, as the Author speaks of.

- 14 A late Author saies: *If you do remove Cherry-trees, yee ought to remove them in November, and Iannuarie.* This is a *hurtfull Instruction*: For *Cherry-trees* and other kinds of trees, ought to be removed about the end of September or sooner, very many especially *Cherry-trees* may (with most advantage) be removed in *August*: And this is a *Generall Rule* for removing them, and all other Trees whatsoever so soone as they have done growing in the Branches, they may be removed. And some have done growing at the beginning of *August*, or sooner, others, a Month, or Five weeks. after, others not of two Months after: but the sooner they are removed after

after they have done growing in the branches the more advantage they get against the spring, by growing a while after in the Roots before winter.

Thus much for the first sort of Errors: *Instructions hurtfull and dangerous.*

The second sort are, *Instructions for effecting of things impossible to be done by the meanes prescribed, and others impossible to be done by any meanes.*

Didymus tells us how we may mix divers kinds of fruits, and thereof make one new kind: *Accipienda sunt duo diversi generis sarmenta, eaq; scindenda per medium, &c.* The Instruction is too large to shew it verbatim: this is the summe. Two Grafts of divers kinds must be cut through the midst, and the two halves bound together, which must be set in the earth, & watered till they bud forth.

Another to the like purpose. *Binde the Grafts of a Peach-tree, and of a Nut-tree together, and the fruit will be halfe Peaches and halfe Nuts:* And againe he saies: *Binde the Grafts of a white Fig-tree, and a black together, and plant them, and the Figs thereof will have the flesh on the one side white, the other black.*

Rara avis in terris nigroq; similima Cygno.

If men can but make the Swanne and the Raven breed together, they may have a strange kind of Fowle, a black Swan it may be, which may as soone be done, as to make these fruits mix.

These, and the like *Instructions* are ridiculous, fit to be passed over with a Jest, but if men require a serious answer, it is given (truly) by Sir Fr. Bacon, in his *Nat. Hist.* He saies, *Such Grafts will put forth their severall Fruits without any commixture in the fruit.* No doubt they will, if it be possible for two halfe grafts (so used) to grow, we see by continuall experience a small Bud of a Graft (no bigger then a grain of wheat) will keep it's own nature against a faire large stock, of another kind.

Secondly, Another of this kind is laid downe by *Albert. Mag.* he saies: *Latamen est unum eorum qua precipue Plantam mutatur à sylvestritate in domesticationem. Manure (or good soyle) is one of those things which changes wild plants, into a mild & pleasant nature.* This cannot be done by any meanes. Different kindes of fruits, as they will not mix one with another, by the meanes newly mentioned: so neither will they change into another kinde. Lord Bacon tells us: *It is the seed (of*

Cent. 5 pag.
119.100.

2
Lib. sept. v get
cap. 1

any kind of Creature) and the nature of it, that locketh and boundeth in the Creature that it doth not expariate, or change from one kind to another. The seed of every fruit retayneth strictly, the nature of the fruit of which it came which will not be changed by any meanes.

3

De Natura &
viribus Ar: For:
7.

Another of the second sort of Errors is this:

Lonicerus gives an Instruction for procuring fruits with an excellent Aromatick, and spicy tast: it is this: *Arborem ad medullam usq; scindito, & ligni parce exacta, aromata qua vulneris inserito* &c he saies: Cut a Tree to the pith, and part of the wood being cut out, put in such sweet spices as You thinke good, then daube the hole with Clay, after lay the branches of the young plant in the Earth, that by its moisture and fatnesse the Branches may unite, then bind together the young twigs that spring from them, so that there may be made one fruit or branch of divers, and the fruits comming thereof retaine the tast of the spices.

Another whose Booke (hee saies) is published by authoritie gives this Instruction:

To have coloured Apples, with what colour yee shall thinke good: Yee shall bore a slope with an Auger, in the biggest part of the body of the Tree unto the midst thereof, and then looke what colour yee will have them of, first yee shall take water, and mingle your colour therewith, then stop it up againe, with a Pin: and wax it round about. To may mingle with the said colour what spice yee list, to make them tast thereafter: Thus yee may change the Tast, or colour of any Apple.

Another saies: To have Peaches of savor like Muske: in Grafting put into the Cleft a Graine of muske: and to have the Tast like Roses, put into the cleft dried Leaves of sweete Roses.

Another late Author saies: with a Chysell cut up the barks of a Tree round about, and anoynt the barks within with powder of Cloves, or Nutmegs, then set it on againe, and stop it, close which wax round about, and within thrice bearing it shall bring a faire Muscadell fruit which yee may Graft and they shall be all after, Muscadell fruits:

This Author saies further. To have all stone fruit tast as yee shall thinke good, lay the stones so soake in such liquor as yee would have them tast of.

Divers others speake to the like purpose.

These are strange fancies, meerely imaginary things: neither Reason nor Experience dictate any such. They are not only invalid,

valid, or of no power at all, to effect what they propose, but are also *Hurtfull and dangerous* to the Trees, and Grafts; But if they might be done without danger, yet are they not able to worke any such effects as are promised, For it is not possible such small proportions as they speake of, should communicate and transerre their vertues through all the parts of the huge and vast bodies of trees, and to multitudes of Fruits, much lesse that they should do this for many yeares, and least of all that the Grafts (cut from these Trees) should retaine these vertues, being set on other stocks.

May it reasonably be said, That a Messe of sweete and pleasant meat, nay only a Bit of such meat given to a Child of tender yeares, the same will retaine the vertues, and strength of such meat, all his life time, yea will transerre the vertues of it to his children after him; when every one knowes the strength and vertue of the best meat or drinke (though taken in great quantity) is soone over, and spent, and that it is a continued daily supply, that does uphold and maintaine the body in good state and condition.

We have no reason to believe that the vi. tues and strength of any daintie dish will continue so long with us, as *Elia's Morsell of meat* did with him, which yet was but fortie daies, and that was a Miracle too: how much lesse reason have we to think it will last many yeares.

Is there not I say as much reason for this as the other. Admit it were possible that a small quantitie of *sweet spices* should transfuse & communicate its properties to all the parts of a tree, yet it would not continue long in it, but it must be a *continued, and daily supply of such sweet things*, as must work that effect, if possibly such a thing may be, by any meanes. Creatures retaine those properties that are fixed, and radicated in them *by nature*; according to their *innate and intrinsicall forme*, but easily, and quickly cast off such as are *adventitious and accidentall*, as these things are.

Another of the second sort of *Errors*, is this, *Lanicera* gives an *Instruction* to produce coloured fruits: *Ramo Cerasi (sive alterius Arboris) scisso ad medullam, Lazurinum, aliumve colorem inseris, sic eundem fructum refert.* that is, put into the bough of a Cherry-tree (or any other tree) cut to the pith, the Azure stone (which is partly green

Nat. hist. fol. 6.

De nat. stirp.
c. 96.

and partly blew) or any other colour which are meanes to colour the fruits of such trees.

Ruelius saies, *Non desunt qui sub Arbores Rosas serant, sic rubra Poma dari promittunt. Some set Roses under fruit-trees, and say by that meanes the trees will bring forth red fruits. So Democritus: Si volēs rubrum habere: obtinebis, Rosas purpureas sub arbore confitis.*

The same instruction is given by a late English Author.

Another saies, to have coloured Peaches, we should colour the kernells within the stones, and the fruits will be of the same colour.

The same Author saies, to have Red Apples, put the Grafts into Pikes blood.

We see here their prescriptions for rare colour'd fruits, which are as farre off from truth or Reason, as the former concerning fruits of an *aromatique* or *spicy taste*, for the things are not only dangerous if tryed, but if it were not so, yet are weake, and invalid towards the working of any such effects. Because colour is an *accident*, cleaving to some substance and as the substance is dissolved, and converted into another body, then it looseth its accidents, which it had before, as colour, shape, &c as a peece of cloath, wood, or the like, being burned, rotten or otherwise dissolved, does loose its colour, or other accidents, that it had before its change. And coloured Meats, eaten and turned into flesh, blood, & spirits, loose their colours, taste, &c. So the juyce of the earth, if it be white, black, browne, or any other colour, yet when it is drawn by Roots, for instance: Carrots, then it is turned into a Yellow, or Reddish colour, or if drawn by Turneps, it is then converted into a white colour, though it were a quite contrary before.

So also of Liguors, (or other things of delicate colours) being converted into the substance of Trees, Fruits, and Leaves, they loose their former colours, though never so glorious, and beautiful. And if great quantities of coloured liquors, or other substances, cannot produce coloured fruits, how much more impossible is it that a drop, or two, of any coloured thing should doe it, or only colouring the kernells (as he speaks of:) which could not become trees of many yeeres after. It's cleare, that fruits convert the substances they draw into their own natures, and receive little or no alteration, unlesse by a constant, and continuall supply from yeare to yeare. Concerning setting Rose-trees under other Trees, to produce coloured fruits, it is one of the most ridiculous

ious conceits that I have read, what is it that should worke the effect: may it be imagined that the Trees can see the *Red-Roses* as *Jacobs sheep* did the *Rods* in the water, and so bring forth fruits according to the same colour, can any man apprehend so much as a colour, or shadow of a Reason for it? Gen. 30. 37.

Another of the *second sort of Errors* is this:

Affricanns gives an Instruction to procure *Walnuts* without husks: *Nuces nudas & sine putaminibus edent Juglandes &c.* *Walnut trees* (he saies) do bring forth bare nuts without husks, if the huske and shell be broken, and the kernell taken out without hurt, and wrapped in wooll, or fresh *Vine leaves*, that the kernels may be preserved from *Ants*, or other things, and then set in the earth againe. *Florentine* affirmes the like of *Almonds*, if ashes be sprinkled in the holes where they are set. So another late Author: not onely of *Wal-nuts* and *Almonds*, but of all other shell fruits. 5

Were it not a wonderfull sight to see *Walnuts* and all *Nuts*, to grow without husks, we know the Nuts of themselves have no stalk, and how then should they grow upon the Tree without husks to inclose them. What is it that should worke this strange effect: is it because the kernels are put into the ground without shells, and for that the tree springs from the kernels only; Doe not all Trees spring from the kernells only, though set with their shells, the husk and shell, contribute nothing at all towards the Tree, they open for the kernell to spring out, and then rot themselves.

Another of this *second sort* is this:

A late Author gives Instructions about early fruits, and late: and chainge of fruits by Grafting he saies: If you graft a late fruit on an early stock, the fruit will be early, and if you Graft an Early fruit upon a late stocke, the fruit will be late. As if (saith he) you graft *Apples*, on *Mulberry-trees*, you shall have fruit all sommer, even till November. And that if you graft a *Plum-tree*, on the *Nut-tree*, the husk will be like the *Nut-husk*, but within it will be a *Plume*. Or if you graft a *Plum* (or any other fruit) on the *Fig-tree*, the fruit will grow without Blossoming. 6

These things cannot be; for contrary kinds will not grow together, as the *Plum-tree* and *Fig-tree*, or *Plum-tree*, and *Nut-tree*, but if different sorts would agree, and grow together yet these effects would not be, because *Grafts* doe alwayes rule,

pag. 100.

& keep their own natures, or alter very little. *L. Bacon* in his *Nat. hist.* saies plainly: these are imaginations & untrue, because (saith he) the *Cions* overrule the stock quite. So againe pag. 97. which *Experience* confirms.

7

Another of the second sort of *Errors* is this: *Democrisism* (as one affirms) gives an Instruction for procuring fruits with *Inscriptions*, and *ingravings* upon them, in any figure or shape.

To this purpose: *Open the shell of an Almond, and write upon the kernell what you will, and wrap it in paper, and set it in Clay mingled with swines dung.*

A late Author saies, *Steep the stones of Peaches two or three daies and then open them, and with a brasse pen write on the rind of the kernells after put them againe into the stones, and wrap them about with paper, or parchment, and plant them, and the fruit will be written, and engraven.* Is not this an odd conceit: that writing upon the kernell, should produce fruits written or engraven. A man (no doubt) with as good successe may engrave, or write upon the shell or huske of an Almond, or other fruit, as upon the kernell, or if he will upon the paper or parchment, in which it is inwrapt: for the Rind of the Kernell contributes nothing to the tree or fruit, but opens (as the Huske or shell) to let out the inner part of the kernell.

But if a man desires to have fruits with *inscriptions* and *engravings*, he must take another course prescribed by a Learned Author, (upon better grounds) which is, *by writing upon the fruits with a needle or badkin, when the fruits are young, and as they grow bigger, so the Letters will grow more large and graphically.*

Concerning the second sort of *Errors* thus much, it were easie to mention many more as idle as these, but I shall not trouble my selfe, nor the Reader with them at present: only I say in the generall, let men take heed of such things asserted by Authors, as have neither *Reason* nor *Experience* to uphold them, least they spend their money, labour and time about them, and instead of profits and pleasures, find discouragements, and trouble.

The third sort of *Errors* are, *Assigning wrong causes to effects.*

One Error is this, some have conceiv'd, that *Grafting* is the cause of early bearing of fruits, and doth much better all fruit. *Alberr: Mag:* saies, it's better, *propter digestionem Succi in nodo flavum:* because of the digestion of the sap in the knot.

Lo: Bacon,
Nat. Hist.
pag. 128.

I

Lib. 5. Cap. 8.
de veget. &
Plant.

So also *Cressinus* : and addes: & iste nodus facit diversitatem De Nat. Plant.
 omnem, qua est in Malis, & Pyris, & ceteris fructibus: The knot, Lib. 2. pag. 87.
 (which is between the Graft and the Stock) makes all the difference which is found in Peares, Apples, and other fruits: Bapt. Lib de Cult.
Perr. likewise ascribes all to Grafting: He saies, Trees coming of & Inist.
 seed, Longa est expectatio ad fructuum productionem: Inistio vero in
 aliquibus eodem Anno producit. Trees coming of seed, are long
 ere they beare fruit, but being Grafted, some kinds beare in a
 yeare or two. So also *Columella* Lib. de Arbor. pag. 490. Lo. Nat. Hist.
Ba. wanted some experience in this point, who saies, There pag 97.
 is no doubt, but that Grafting (for the most part) doth meliorate
 fruits: and againe, Grafting doth Generally advance, and meliorate
 fruits above that which they would be, if they were set of kernels, or
 stones. The Cause (saith he) is manifest, for that the nourishment
 is better prepared in the stocke then in the crude earth.

I say herein these Authors assigne a wrong Cause to an effect:
 for simply Grafting contributes nothing at all to the early bea-
 ring of Fruit, nor to its goodnesse. But the Cause is In the
 Nature of the Grafts: if they be Grafts cut from bearing trees,
 and of good kinds, they beare fruits in a yeare or two, but if they
 be Grafts from young unbearing trees coming of seed, such Grafts
 will not beare the sooner for Grafting, it is not simply grafting,
 I say, nor the knot (as the Authors speake of) that makes trees
 beare one yeare, one day, the sooner, for if so, then grafts from
 young unbearing trees, coming of seed, grafted in the same man-
 ner, and upon as good stocks, as other grafts from old bearing
 trees, they would beare fruits the one sort as soon as the other:
 but it is otherwise: so that the Cause lyes not simply in grafting,
 but in the Nature of the grafts:

Neither does Grafting make fruits (at all) the better, otherwise
 then as you chule grafts of a good kind, for wee know Grafts rule,
 and keepe their owne Natures. And the Cause is not well assign'd
 by the Author who saies: it is for that the nourishment is better
 prepared in the stocke, then in the crude earth: for we know the
 Branches of an ungrafted tree, receive sap not immediately from
 the crude Earth, but from a stock or body, as well as the branches
 of the Grafted tree: the stock of the Grafted tree, is a wild stock,
 and of the same nature, as is the stock, or body, of the ungrafted
 tree: they are both alike, and the concoction and nourishment

Nat hist. pag.
109. and p.
115.

in both, is alike, & the Cause being alike, why is not the effect alike. Its plaine: this is not the Cause but the Cause is in the Graft not in the stocke, though the nourishment be never so well concocted in the stock; and the fruit is not made better, or worse simply by grafting: The Author asserts this truth plainly elsewhere: the graft (saith he) overruleth the Stocke: and againe: the Grafts will govern: that is: they keepe the Nature and properties of the trees from with they were gotten:

Another of the third sort of Errors, is this.

2

A late Author saies: the Cause why trees beare not fruit in a few yeares after grafting is, because they were grafted in the old of the Moone: for (saith he) so many daies as the Moone is old when you graft, so many yeares will the Graft be ere it beare fruit.

The Cause is here mistaken: for the Moone hath no such influence upon fruit-trees, as to withhold their fruits in this manner: men (we see by experience) graft in all seasons of the Moon, and find no such difference in the bearing of the trees: The cheife Causes of unfruitfulnesse of trees, are when they are not fit for the Countrie where they are planted.

Secondly: when the Grafts are chosen from young unbearing Trees thirdly. Repletion, or overmuch nourishment:

Fourthly: Coldnesse, or overmoistnesse of the ground:

Fifthly: frosts, or cold Winds in the Spring.

Thirdly: Another of the third sort of Errors is this.

Many conceive that sap in Trees doth descend from the Branches to the Rootes, which causeth severall effects; as falling of the Leaves, goodnesse of the Rootes of divers Plants for use &c: but the Cause of these Effects is mistaken, for Sap in Trees never descends, but alwaies ascends. And Leaves of Trees fall in Autumne, not because sap descends from them, but because Sap ascends not to them sufficient to nourish, or feed them any longer.

And if Rootes are best in Autumne, that is not Caused by descent of Sap, but for that the Body, and Branches of a Tree in Autumne, draw but a small quantity of Sap from the Rootes, and the Rootes even then draw sap for the Earth, and increase upon it, and are well stored with sap after the Branches have done increasing: and there the sap rests chiefly, at that season.

Some who hold descending of sap may (perhaps) confirme their Opinion from small springs of the Rootes of Plants when they are

are removed in *Autumne*. Its true: The Roots of Plants set in the beginning of September (or about that time) doe spring forth a little at the cut ends of the Rootes, before winter, *not because Sap descends from the Branches to them*, for though all the Branches are cut off before setting, (as sometimes they are,) yet the Rootes will spring *then*, because some degree of heate (proportionable to that purpose) is, *at that season*, in the top of the earth by reason of the immediate fore-going summer, soe that Plants set while this heat lasteth, they will germinate, and spring forth in their Rootes before winter: (the husbandman knowes in this *season*, it is best to sow his *Wheate and Rye* :) And also because the Sunne (as yet) hath an influence sufficient to make seeds, and Roots of Plants to spring forth, which towards *December* it hath not, being then too remote from us, soe that it is not descending of Sap that *Causeth* these effects.

The learned *Lord Bacon* did not well consider this poynt, who supposed a *descention of sap in Autumne*, speaking concerning setting a Bough in the ground prepared by disbarking for that purpose, saies, *the Cause why it will soone after be a faire Tree, may be this, the baring of the Bark keepeth the sap from descending towards winter: here's a wrong Cause assigned to an effect*, for it is not the supposed keeping up of the Sap (by that meanes he speaks of) that *Causeth* such a Bough to grow the better, but the cause is for that such a Bough, by disbarking, hath got some small Roots, or strings, (or at least some roughnesse or knobs capable of Rootes,) in the passage up of the sap, whereby (being set) it will become a Tree in certaine yeares.

This Opinion of *descention of sap in Trees* is an old Error, of many yeares standing, and is radicated in the Minds of most men, many using it as a *Similitude* to illustrate some spirituall thing, as if it were a reall, and undoubted truth, whereas it is but a weake, and groundlesse conceipt, and contrary to *Reason and experience*. I will therefore lay it open more plainly, and prove, and demonstrate the Truth concerning the *motion of sap in Trees*.

Sap in trees allwaies moves upwards, and it is contrary to the Law, and course of nature for *sap to descend*, *Natura nil agit frustra*, nature does nothing in vaine: Now it were a vaine worke in Nature to cause *Sap to ascend, up into the Branches*,

to descend againe to the roots, the Roots send sap to the Branches, and not the Branches to the Roots, when it once comes into the Branches, it is converted into *Wood, Barke, Leaves, Fruits, &c.* Whence is all that great *Bulk, and body*, which we see a Tree arise to in a few years; if sap should descend one while, as it ascends another, it would follow, that as a Tree increaseth by ascension of sap, so it would decrease by its descension.

This may be more cleare if we consider the Cause why sap in Trees stirs, & ascends, & also why it riseth not after such a time to make any growth. When the sunne in the Spring of the yeare by degrees drawes nearer to us, then sap in Trees begins (by its heat, and influence) to move, to swell, and open the Buds, and to cause the Branches to shoot forth, which increase by it all the summer: and as the sunne (by degrees) drawes nearer, and grows hotter, so the sap (by degrees) increaseth, and riseth more plentifully, and when the sunne is nearest, then Trees are fullest of sap,

Now observe: As by the vicinity, and nearnesse of the sunne (which is by degrees) the sap is increased by degrees, so likewise, by the sunnes remotenesse, and absence (which is also by degrees) in his going back againe, the sap is also diminished by degrees, that is; ascending lesse and lesse in quantity, untill the sunne be gone so farre from us, and the heat, and influence of it be so weake, that it works not to cause sap to rise up where by the branches may increase any longer, and then the Branches, and Buds of Trees are all at a stand, and grow no more, untill the next spring. And at that time the Leaves loose their beauty, and fall off, because sap riseth not up to them sufficient to feed them any longer, but only so much as to preserve life in the Tree. I would faine know (of those who hold descension of sap) what should cause it descend, for, *Nullus effectus datur sine causa*: there can be no effect without a cause, they cannot say that as heat causeth it ascend, so cold causeth it descend. Cold never causeth sap to stir, but to stand, or move slowly. Cold is of a condensing nature, and does constipate, and fix, rare and fluid bodies: but if sap of its owne nature would descend, yet there is none in the Branches at that season of the yeare, that they can spare, but all that has ascended in the sommer is converted into the substance of the Tree, its Leaves, and fruits.

And further: To prove this more fully, and clearly, by a plaine

plaine undeniable Argument. If there be a continuall ascension of sap, then there is no descension, but there is a continuall ascension, therefore no descension.

To prove the *Minor Proposition*: That there is a continuall ascension of sap in Trees.

The Sunne and Ayre continually draw sap, and moisture out of Trees, and other *Vegetables*, as the *Lord Bacon* and others conclude, and as may be made appeare to *Reason and Experience*: We know, if Branches and Twigs of Trees, being cut off, and laid aside in the sunne, and ayre but for a few daies, they will be contracted, and wrinkled, the ayre drawes out the sap and moisture, and such having no supply of sap from the Root, they quickly wither. Now know also; that the sunne, and ayre have the same operation upon the *living Branches and Twigs*; drawing sap, and moisture out of them likewise, but they are not contracted and wrinkled as the other, because there is a continuall supply of sap from the Root, as well in winter, as in sommer: which keeps them in their full dimensions without wrinkling, or contracting.

Further observe: to prove this. If we remove *Plants in September*, or about that time (the pretended season of descension of sap) and let them lye out of the earth a day or two, we shall finde, that the sunne and ayre will (in that short time) have sucked, and drawne out sap and moisture from the Branches, so that they will be apparently shrunke, and contracted. (I have seene some Branches so much wrinkled, that I questioned whether they were dead, or alive.) But after the Plants have beene set certaine daies, so much sap will be ascended as will againe have filled up the wrinkled, or contracted bark, so that it is evident and apparent hereby, that some small quantity of sap hath ascended into the branches since their setting, and if so, then its cleare there's no descension of sap, can any thing move contrary waies at one time? And if we graft in *November and December* (the very dead time of winter) the grafts have some small supply of sap even then, else the sunne and ayre would spoyle them, by dayly sucking out their moisture, were there not a supply of sap from the Root, sufficient to keep them alive untill the spring. Its manifest then from what hath been said, that sap in Trees ascends as well in *Autumne, and Winter, as in Sommer*, so much as to preserve

life in Trees, by supplying what is extracted by the *Sunne* and *Ayre*: so that it may be concluded there is no *descension* of *sap*; unlesse men will hold that a thing may move severall waies, *upwards and downwards*, at one and the same time, which is a contradiction, and impossible in nature.

Thus much concerning the *three sorts of Errors in the Theory of this Art*.

First: *Instructions hurtfull, and dangerous.*

Secondly: *Instructions for effecting some things impossible to be effected by the meanes prescribed, and others impossible to be effected by any meanes.*

Thirdly: *Assigning Wrong Causes to effects.*

I will now discover some *Errors* that I finde in the *practise of this Art of Planting Fruit-trees*, that they may be avoided.

1 **O**NE Error in *Practise* is this: Many remove their Trees in winter, or neere the spring, whereas they ought to remove them in September, or thereabouts. Many Plants are ready to remove in the beginning of August, and before, which if done, such have a great advantage of those removed in winter or neere the spring, for trees removed betimes in the yeare, grow in their Roots before winter, and so make a faire preparation against the spring: And this is a *Generall Rule*, for Transplanting all trees. To remove so soone as they have done growing in the branches, which may be knowne by the top, or ends of the branches, if the tops be closed and shut up, they may be removed without danger, though it be in August, or before, which is no small advantage to them. See pag: 60.

2 **A**nother Error in *Practise*, is *Planting trees too neere together*: This is a great and generall Error, many thinke, the more Trees they have, the more fruit: but a few having roome enough to spread will beare more fruits then many, crowded one upon another as the custome is, and fruits will also be better when the sun may come round about the trees. I account 10 or 12 yards a competent distance for *Apple-trees* and *Peare-trees*, upon ordinary soyle, but if the ground be speciall good, then give them the more roome: for *Cherry-trees*, *Plum-trees* and such like, 7 or 8 yards is a convenient distance. Another

Another Error is this: Many Plant Fruit-trees unfit for the ³ Country where they plant them, Their care is chiefly to chuse *Planting trees unfit for the Country.* Grafts of the best kinds and faire Plants to look upon, not considering so much, whether such kindes will prosper, and beare fruits well in those *Clymates*, and places where they plant them. And hence it is often, that many who have faire and goodly fruit trees, have very little fruit from them. It is an excellent Rule to chuse those kindes of fruits, which we (or others) finde by many yeares experience, to be good bearing trees, in those parts neereft to us: although the fruits be not altogether so good as some others.

This is another Error: Many men when they procure Fruit-trees to plant an Orchard, they (most commonly) desire the ⁴ *Chusing the greatest and fairest Plants.* Hoping such will be trees the soonest: Whereas great Plants many of them dye, and others live very poorely, but small Plants removed live generally, and thrive more in 2 or 3 yeares, then great ones in 6 or 7: for removing great plants is a very great check to nature, such as many times its not able to recover.

Another Error in practise is this: Men generally leave too many ⁵ *Setting trees without dis-branching.* branches on the Trees they plant, and will by no meanes have the Branches cut off, unlesse a few it may be, whereas for want of disbranching plants, they loose branches, body, roots, and all. If they will plant great plants, they must disbranch them, small ones need not.

Another is this: For the most part men neglect to plant their ⁶ young trees, in as good or better soyle, then that from which they are removed. They fetch them from Nurseries about London *Planting trees in worse* (which are generally of very fertill soyle) & plant thē (it may be) in ordinary, or poore soyle, and thence it is that many of them dy, or grow weakly: Whereas they ought to lay speciall soyle (the best they can get) next to the Roots which having taken hold, & being well rooted in the ground, they will by degrees, thrust ⁷ *Setting graft and stock smooth on the outside.* their roots, and grow well in that which is worse.

Another is this: Some in grafting take care to set the Graft and stock even and smooth on the outside, not considering *that* that

that the bark of the stocks are (for the most part) thicker then the barke of the grafts. Whereas they ought to take speciall care to *set the inner sides of the barks together*, (which is the chiefeft Rule in Grafting) because there is the chiefe current of the sap.

8

Grafting
long, or for-
ked grafts.

Another Error is this: *Grafting long, or forked Grafts*: commonly the longer Grafts are, the lesse they grow, and the shorter they are cut, the longer they grow in a yeare.

9

Suffering
fruit-trees to
grow like
Timber trees

Another is this: Many let their *Fruit-trees grow straight up very high, before they spread into boughs*, and they are rather like *Timber trees* for building, then *Fruit-trees*, for bearing Fruits:

Whereas they ought to cut off the Top while the Plant is young, about an Ell, or a Yard and halfe from the ground, that so the Plant may spread, and enlarge it selfe, and one Tree well ordered in this respect for spreading, will have as many small boughs (and consequently will beare as much fruit) as three or foure (it may be) of such Trees as runne spiring up a great height without spreading.

10

Giving too
much nourish-
ment to fruit-
trees.

Another Error is this: Some give *too much nourishment to fruit-trees* Letting some fat water (it may be) runne to the Roots or lye too neare them, or else by powring, or laying some fertill substance to their roots, when there is (sometimes) more need to deprive them of their too fat feeding, which causeth them to luxuriate, and spend their strength in great and large shoots, and broad leaves, and blossomes, and leave off bearing fruits: Nourishment to Fruit-trees ought to be moderate, as to other Creatures.

11

Nursing up
Quince-trees
of seed.

Most men nurse up *Quince-trees of seed*, or slips from the roots, and seldome or never *Inoculate or Graft them*, as they doe other trees, whereby they loose their fruits many yeares, which they might gaine by *Grafting or Inoculating of them*. And when (after a long time) they doe beare: yet their fruits are not so good (if the trees come of seed) at their first bearing, as grafts would bring, being cut from *old bearing Trees*.

12

Pruning off
too many
shoots from
Wall-trees.

Another Error in practise, is this. Many in pruning *Appecot-Trees* and other *Wall-trees*, they prune off most of the *fresh young Branches of the last yeares shoot*, and preserve the *old and big branches*, suffering them to runne up a great part of the wall, without small twigs, or branches. Whereas they should still from yeare to yeare, preserve the small shoots, nailing them up to the wall

wall yearly (all or most) from the lowest part of the Tree, to the top, and leave no part of the wall void of branches, and cause the branches to spread along the sides of the wall both waies, and not suffer them to runne upwards too much.

Another Error amongst some is this. They graft young Plants that came of seed, in the place where they were sowed, (before they have beene removed, whereby they would get good Roots) And hence it followes. That such thrust downe a single Root, or two (commonly) into Clay, Gravell, or moist ground, &c. which root or roots, draw bad nourishment, and thereby hurt the Trees and Fruits, and in case any of them be removed afterwards (being grafted) they want good Roots, for that they were never removed (being young) to get good Roots.

See how to order them, pag. 45.

13
Grafting
seed Plants
before remo-
ving.

Some also when they transplant young Trees they usually set them with all their Roots, whereas the Roots of all Trees transplanted, ought to be pruned: See how: pag. 61.

14
Not pruning
the roots of
Plants.

Another Error is this: Many breake off all the Buds upon the stocks that are engrafted, before the Grafts put forth, which endangers both Stock & Graft. For Buds upon the stocks should be let alone, all, or most, untill the Grafts have put forth & be able to draw up sap, and then break off all the Buds below the Grafts, that they may have all the sap.

15
Breaking off
Buds before
Grafts grow.

Concerning Errors in practise thus much.

And so I have done (at present) with all the particular Mysteries concerning the Ordering of Fruit-trees, and Fruits.

Hereafter I may communicate more, as God (who instructeth the Husbandman to discretion, & teacheth him) shall discover them to me. None shall ever (in this life) know all the secrets of Nature in this Art or any other, but yet (by meanes of time, and diligence) we are still finding out new Experiments.

Esay 28. 24.
25. 26.

11-30
11-30
11-30

THE

THE
SPIRITUALL USE,
OF AN
Orchard ; or Garden of
FRUIT-TREES.

Held forth in diverse *Similitudes* between
Naturall and *Spirituall* Fruit-trees, in their
Natures, and Ordering, according to
Scripture and *Experience*.

JER. 17. 8. He shall be as a Tree Planted by the Waters, and that spreadeth out her Roots by the River, and shall not see when heat cometh, but her Lease shall be greene, and shall not be carefull in the yeare of drought, neither shall cease from yeelding Fruit.

ROM. 11. 23. And they also if they abide not still in unbelieve, shall be grafted in, for God is able to Graft them in againe.

Ver. 24. For if thou wert cut out of the Olive-tree, which is wild by nature, and wert Grafted (contrary to nature) into a good Olive-tree, how much more shall these which be the Naturall Branches, be Grafted into their own Olive-tree.

JOH. 15. 1. I am the true Vine, & my Father is the Husbandman, every Branch that beareth Fruit, he purgeth it, that it may bring forth more fruit.

CANT. 2. 3. Like the Apple-tree among the Trees of the Forrest; so is my beloved among the Sonnes. I sat downe under his shadow with great delight, and his fruit was sweet to my tast.

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To the Reverend

DR L A N G L E Y

Master of Penbrook Coll. in Oxon:



HE Apostle *Paul* tells us (Reverend Sir) that the invisable things of God (his Attributes) are clearely seene by, and through his Creatüres: It is our duty (therefore) to study the Book of his Works, together with the Book of his Word, of them we may learne many profitable Lessons.

Now amongst all the Creatures below Man, I know none that teacheth us so plainly, and convincingly, as *Fruit-trees*: The Garden of *Fruit-trees* is a *Volumne full of good Notions*: some Instructions lye obvious, and plaine to every mans eye, an illiterate man may here read distinctly, And the Learned man, may find matter enough, wherewith to exercise his Wisdome and Judgement.

They afford us many usefull *Similitudes*, and teaching by *Similitudes*, as it is most plaine, so it is accounted most profitable, not only as they give light to a discourse, helping the *understanding*, but also in respect of retention in *Memory*, of what is held forth. The *Prophets and Ancients* in the Church of God, taught much by *Similitudes*, yea, our blessed *Saviour* (whose example both in Doctrine and life, we should strive to imitate) he taught frequently by *Similitudes*.

The Epistle Dedicatory.

And (*Sir*) it is observed, that you follow these examples in your Ministry; Your Sermons, and discourses being full of pregnant *Similitudes*, and especially of *Similitudes taken from Fruit-trees*, which (indeed) was the maine encouragement I had, to present this part of the Worke to you. And which I doe also, as a testimony of my thankfulnesse for all your labours in the Lord, and care for mee, from time to time, especially in my great Afflictions, which befell me about six years agoe in this place, when I was even stript naked both of inward, and outward comforts, walking in darknesse, seeing neither Sunne, nor Starres, for many Months together, out of which the Lord (I will speake it to his praise) hath delivered me with great advantages.

If what I have here donne may be any way serviceable to you, (or others) I shall be glad.

That improvement which I have made of the *Observations in Nature*, may serve for those who cannot (without some directions) understand the Language of Fruit-trees. God the Great Husbandman of his *Vineyard the Church* hath many Workemen which he employes in ordering his spirituall Fruit-trees. Ministers of the Gospell (being Coworkers with him) they plant and water, & God giveth the increase; and every private Christian (in his spheare and compasse) is bound to improve his *Talent* for most advantage of the Kingdome of Christ, which that it may flourish, and be enlarged more, and more, is the endeavours, and constant Prayer of

Your faithfull Servant

R. A. AVSTEN.



A Preface to the READER.

WHEN we have gone through all the workes and labours to be performed in the Orchard, & have received thereby a rich recompence of Temporall Profits & Pleasures in the use of the Trees and Fruits, we may (besides all that) make a Spirituall use of them, and receive much Profit and Pleasure thereby.

The *World* is a great Library, and Fruit-trees are some of the *Bookes* wherein we may read & see plainly the *Attributes of God his Power, Wisdome, Goodnesse &c.* and be Instructed and taught our duty towards him in many things even from Fruit-trees for as trees (in a Metaphoricall sence) are *Bookes*, so likewise in the same sence they have a *Voyce*, and speake plainly to us, and teach us many good lessons.

The Lord Bacon sayes, *God hath two great Bookes which we ought to study, his Word, and his Workes: the one discovers his Will, the other his Power.*

The *Apostle* sayes *Rom. 1. 20.* The invisible things of him from the Creation of the *World* are clearely seene, being understood by the things that are made, even his *Eternall Power and Godhead.*

The *Creatures of God* are to be studied as *Bookes*, for in them we may read the *Attributes of God* and observe some small resemblances, and darke shadowes of his infinite Excellencies, and Perfections, they are seen *Per speculum Creaturarum*: They who cannot read a line in any Printed Booke, may read many good lessons in the Booke of the *Creatures.*

Fruit-trees though they are dumb companions, yet (in a sence) we may discourse with them: The workes of God speake to the
Mind

A Preface to the Reader.

The Saints
bule exalt-
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tion.p.87.
k p.205.

Mind as his Word does to the Eare: Mr Boulton sayes *Our Eyes* (Especially on the Sabbath day) ought as little Bees fall upon severall objects, and from them (as from so many Flowers) gather honey, and bring it into the hive; That is; sweet heavenly wholsom Meditations for magnifying the Creator in all his Attributes.

Fruit-trees and other Creatures doe truly (though without an articulate voyce) Preach the Attributes and perfections of God to us; And we may read divine Truthes in them, as in a Booke consisting of words and sentences; the Creatures of God (according to their natures) speake out the prayses of God Ps. 145.10. *All thy workes praise thee O Lord, and among them Fruitfull Trees.* 148. 9.

Things without sense or life, have a voyce, and speake to us. Ps. 19. *The Heavens declare the glory of God.* ver. 3. *Their voyces are heard in every language, or Nation.* and ver. 4. *Their words goe to the ends of the World.*

So that not only rationall and irrational, but even Inanimate Creatures have a voyce, and speake loudly to men, and it is our duty to learne their language, and hearken to them.

All Creatures (as a holy Man sayes) have a teaching voyce, they read us divinity Lectures of divine Providence.

We must be content to stoope to their way and manner of teaching, as the Egyptians and others in former times, who were instructed by Characters and Hieroglyphiques, by somthing represented to the eye, Notions were conveyed to the understanding.

Dumbe Creatures speake virtually and convincingly, to the mynde, and Conscience.

If we make use of Creatures to serve our turne only in reference to our outward man, we make not halfe that use of them as we ought, we should study the Creatures & learn from them to bring us nearer the Creator, Climbing up by them, as by steps, or staires, till we ascend to the highest Good.

How much of the goodnes & excellencies of God doe Fruit-trees shew forth when they (in their seasons) flourish with Leaves Blossomes & Fruits, especially considered not only as they appeare beautiful to the eye, but also with all their inward beautyes, and perfections, their vertues, and uses in the life of man. Both in Alimentall and Physicall respects; but most of all, as they are SIMILITVDES, and

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and beare the figure, and resemblance of many high and great Mysteries in the Word of God, the Analogie and resemblance is very neere in many things, to the most noble visible Creature **M A N**, *Fruit-trees* beare the Figure and resemblance of what is of highest esteeme with God, *his People, his Jewells, his Adopted Sons*, yea of his *Naturall Sonne*, as we frequently find in Scripture.

Likenes & resemblance of inferior Creatures to those above them, does ennoble, and put some dignity upon them, according to the degree of likenesse. Now what Creatures beare resemblance to man in so many respects as *Fruit-trees*; see the *Observations*.

Anton speaking of the marvelous effects of Nature that ap- De Gen. ad
Lit. Li. 15.
peare in *Seeds, Trees, and Fruits*, sayes they wonderfully manifest the *Attributes of God*, therefore he exhorts us to search into them *Ex ipsa Operibus Dei indagare conemur; consideremus ergo cuiuslibet Arboris pulcritudinem in robore, ramis, frondibus, Pomis &c.* Let us (saith he) inquire into the workes of God, and consider the beauty of a tree in the strength, boughes, leaves, and fruits; he sayes it is wonderfull to see so great a body, rise of so small a feede, which feede has in it, the whole Tree, with the *Leaves, Fruits, and Seede*. for the propagation of the kinde; not in their bulke, and dimentions, but *Virtually* as a Cause producing all these.

Illud germen. ex semine, in semine ergo illa omnia fuerunt primitus, non mole corporis magnitudinis, sed vi potentiaq; causaliter. For, *In exiguo grano mirabilior prestantiorq; vis est, quia valuit adiacens humor commisit ut terre.* In this small feede there is a great and wonderfull vertue, which shewes it selfe being cast into the earth, which then riseth up into a body, and spreads it selfe into Boughes, and Branches, *Quid enim ex Arbore illa surgit: aut pendet quod non ex quodam occulto Thesauro seminis illius extractum atq; depromptum est.*

What riseth, or growes upon the Tree that is not brought; or drawn out of the feede, as out of a certaine Store-house, or Treasury.

Fruit-trees discover many things of God, and many things of our selves, and concerning our duty to God. We enquire of, and discourse with *Fruit-trees* when wee consider, and meditate of them, when we search out their vertues and perfections which God hath put into them, when we pry into

A Preface to the Reader.

into their natures, and properties, *that is speaking to them.*

And when we (after a serious search) doe make some use and result of what we see in them, when we collect something from them concerning the Power, Wisdome, Goodnesse, and Perfections of God, or our duty to God, *that is the Answer of the Fruit-trees.* then Fruit-trees speake to the mynd, and tell us many things, and teach us many good lessons.

Our Considerations of them are the Questions we put to them, and the Inferences or Conclusions, are their Answers. Those are the Lessons they teach us.

Of this see Mr Caryl his Exposition on Job. chap. 12.

Job tells us of many Masters, Creatures of which we may learne, chap. 12. The Beasts, the Fishes &c. and ver. 8. *Speake to the Earth, and it shall teach thee &c.* or (as it is interpreted) aske every slip or sprigg that grows in the Earth, and it shall teach thee. Naturall, and visible things are shadowes to us of Spirituall, and the Spirit of God from things sensible, and visible, raiseth our minds to things spirituall and invisible.

The Ancients were skilled in this kind of Learning, in teaching by SIMILITUDES, and one of them observes, that God sent us the Booke of Nature, before he sent us the Booke of the Scriptures.

The People of God in the beginning of the World were without the Scriptures for many yeares, and they read many things in the Booke of the Creatures.

Isaak went to meditate in the Fields. Gen: 24. 63. And no doubt Learned many Lessons from the Creatures.

Teaching by SIMILITUDES is the most plaine way of Teaching, and makes dark things more cleare to the Understanding, and best to be retained in the Memory. Our blessed Saviour (the great Prophet and teacher of his Church, who speake as never man spake) he taught much by SIMILITUDES.

One sayes, as Windowes are to a house, so are SIMILITUDES to a Discourse: they both let in light.

Fruit-trees are a TEXT from which may be rayfed many profitable Doctrines, and Conclusions, which may be proved by Scripture, and Experience.

Now therefore, seeing many things may be learned from Fruit-trees,

A Preface to the Reader.

trees, for Spirituall profit; I shall set downe some *Observations* which I have made upon them, discovering the Nature, and ordering of *Naturall, and Spirituall Fruit-trees*, in divers *SIMILITUDES*, according to *Scripture*, and *experience*.

As I have planted many *Naturall Fruit-trees* for the good of the *Common wealth*, so also I have taken some *Spirituall Cyences, or Grafts* from them (I meane severall *Propositions* drawne from *Observations in Nature*) and bound them up in a bundle, and sent them a broad for the good of the *Church of God*: And if men will accept of them, and be willing to engraft them in their owne *Gardens*, (their hearts and minds) by the *Husbandmans* watering of them by his Spirit, they will grow, and blossome, and beare much good fruit, here and for ever.

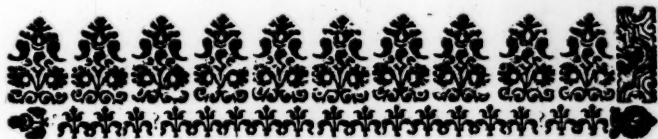
Fruits of Faith, Love, Joy, Peace, and other *Fruits of the Spirit, Bunches of Grapes*, For the feeding, and refreshing of their *Soules* as they travell through the *Wildernesse*, and the increase of their *Glory* hereafter in *Canaan* to all Eternity.

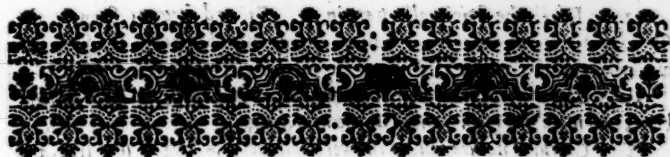
Which Improvement the Great Husbandman grant unto Thee, together with

Thy Servant in the Lord:

R. A. AUSTEN.

* *





Propositions Shadowed out unto us

by Observations in Nature, and Cleared

by Scripture and Experience.

1. **G**OD from all Eternity made choyce of what Spirituall Plants he pleased, to Plant in his Garden the Church, and refused others. p. 1.
2. The dispensations of God towards weake Christians, are more gentle, then towards such as are strong. p. 3.
3. Many Spirituall Fruit-trees bring forth faire, and Spetious fruits to Observation, which yet are unpleasant to the Husbandman. p. 4.
4. Persons joyned in any Relation, they have comfort, or affliction togeather according to their natures p. 5.
5. God calls his People (for the most part) in youth, and more rarely when they are old, p. 6.
6. When the Spirit of God withdrawes, then Mysticall Fruit-trees cease growing, their Leaves, and Fruits fall, and they endure sore conflicts for a time, but at the returne of the Spirit, they are restored to former comforts with advantage. p. 11.
7. Generally those persons who are excessive, and most curious, about the Formes of Duties, have least of the power of Godlinesse. p. 16.
8. By the fruits of Spirituall Trees, we may conclude the Nature of the Trees. p. 17.
9. Some persons flourish with a profession for a time, but in the heat of affliction they fall off.
10. We should bend all our desires, and endeavours that the best Gifts, Graces, and Fruits, may especially encrease. p. 20.

11. While the Spirituall part in us acts, and growes strongly, the fleshy part acts but weakly; so also, if the flesh be strong, the Spirit is weak. p. 23.

12. The more closely a Christian walks with God, the more steadfast he is, and more free from Spirituall enemies. p. 24.

13. Corrupt nature abides in every believer, as long as they live, and is but in part subdued by Grace. p. 25.

14. It is not any outward excellencies, but the Image of God upon the Soule, that is the glory of a person. p. 26.

15. There is a firme, and constant union betweene Christ, and every Believer. p. 28.

16. University men ought (in convenient time) to goe forth into the service of the Church, and Common-wealth; except some choice persons fit for Government of the Societies. p. 29.

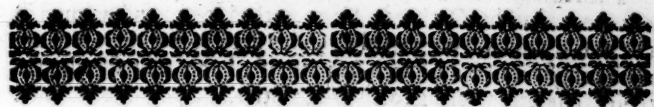
17. Saving Grace, or the Divine nature in Believers, abides in the Soule for ever; But Common Gifts, or Graces may be lost. p. 32.

18. God is well pleased with Zealous, and active Instruments in his Workes; But men of dull, indifferent spirits, he (often) layes them aside, and puts others in their stead, p. 36.

19. The commotions, troubles, and confusions in the Church of God, will end in the settlement, peace, and Glory of it. p. 37.

20. Believers by ingrafting into Christ, doe live in him, and he in them, and are thereby made one with him. p. 39.





THE SPIRITUALL USE OF A GARDEN OF FRUIT-TREES.

THE Husbandman makes choice of what wild Plants he pleaseth, to bring into his Orchard there to Graft, and order to fruit-bearing from yeare to yeare. He leaves other plants in the Woods and waste grounds, he lets them alone, and meddles not with them, but takes and leaves these, or those, as pleaseth himselfe.

The first Observation in Nature.

This is a Similitude of the State of Spirituall Fruit-trees, and shadowes out unto us this Proposition.

That God from all eternity made choice of what Spirituall Plants he pleased, to plant in his Garden the Church, and refused others.

God in his eternall decree chose some persons, and refused others, as his word clearly manifests, he chose some wild plants (here, and there a few) to plant in his Orchard, to order to fruit-bearing and let others alone to grow wild, and bring forth their naturall fruits, and this upon his own free will and pleasure, without any foresight of faith, repentance, good works, or any thing in us: This the Apostle shews Eph: 1. 4. *He hath chosen us in him before the foundation of the world: Vers: 5. according to the good pleasure of his Will: before they had done good or evill, Rom: 9. 13. I have loved Jacob, and hated Esau. and Jo. 13. 18. I know whom I have chosen.*

And our Saviour tells us, Jo. 15. 16. *I have chosen you, and ordained you, that yee should goe, and bring forth fruit, and that your fruit should remaine.*

The Husbandman lets other Plants alone to grow wild without the wall of his Orchard. Many wicked men, and women in the world which were passed by in his decree, and therefore are not brought into his Church, nor Ingrafted into Christ, who (in their Generations) bring forth fower, bitter, and poysonous fruits. Rom 9. 18. *He hath mercy on whom he will have mercy, and whom he will he hardeneth.* That is: He giveth grace to those whom he hath chosen, and denies it to others, leaving them to themselves.

Use.
Esay 61. 3.

The Consideration of this should be a strong and continuall motive to all those who have made their *Calling, and Election sure* (being perswaded upon good grounds that they are Trees of righteousness of the Lords Planting) to praise and admire the free grace of God, who hath chosen them to be his adopted children, *ingrafting them into Christ, and planting them in his Garden,* to bring forth pleasant fruits to himselfe.

We were all of us *wild Plants*, as bad by nature as the worst in the world, and God hath made *choice of us, and left others*: How should this make us admire his rich, and free grace in Christ to us: and to shew forth his praise in our Conversations. The Apostle tells us this is the very end wherefore *We are Chosen*: 1. Pet: 2. 9. *Ye are a chosen Generation, a Royall Priesthood, an holy nation, a peculiar people, that ye should shew forth the praises of him who hath called you out of darknesse into his marvelous light.*

There was no moving Cause why the mysticall Husbandman should make *Choice* of us rather then of others as there is of *materiall Plants*. The Husbandman looks upon their *straightnesse*, and *fitnesse* in other respects (it may be) wherefore he *chooseth* them before others. But the mysticall Husbandman hath all the *grounds and Causes of choice* within himselfe, Eph: 1. 5. *according to the good pleasure of his will.*

Let this therefore teach us, and stirre us up to bring forth all good fruits unto him in abundance, who hath so abounded in love, and mercy towards us, and hath let out his *free grace* in *choosing* of us. And although we cannot recompence the Husbandman, or make him the richer by our fruits, yet we may please him, and hono-ur him thereby. *Herein is my Father glorified, that ye beare much fruit.* Jo: 15. 2.

2
Observation
in Nature.

The Husbandman doth order his young fruit-trees with more *tendernesse*, and *gentlenesse*, then such as are strong, and well *growne*

growne trees, because such (while they are small, and tender) are in more danger of breaking, and bruising, and other hurts, then they are afterwards. So that besides the great Wall, or Common fence about the Orchard, he makes a more speciall fence, with Buses, Stakes, or the like, about each of them, and gives them more choice, and easy nourishment, by often watering them with good Water, that they may grow, & come on the faster.

This is another *Similitude*, and shadowes out unto us this Proposition.

That the dispensations of God towards weak Christians, are more gentle, then towards such as are growne strong.

The mysticall Husbandman hath *Plants* of severall degrees, and ages, in his *Nursery* and Orchard, and according to their capacities he dealeth with them, there are *Children*, *Young men*, and *Fathers* in Gods Family, 1. *Jo*: 2. 12. 13. 14. and according to their degrees, and ages he useth them, the Children are ordered with more tendernes, then the elder sort, *Esay* 40. 11. He shall gather the *Lambs* in his *Armes*, and carry them in his bosome, and shall gently lead those that are with young. He useth them gentle, with great tendernes. So againe, *Hos*: 11. 1. 3. When *Israel* was a child I loved him, *Ver*. 3. I taught *Ephraim* also to goe, taking him by the *Armes*, I drew them with cords of a man, with Bands of Love, I said unto them as they that take off the Yoke from the *Jawes*, and I laid me out unto them. God used them as a loving Father his children, or as a tender Nurse useth her young infant. He gives them *Milke* while they are *Babes*, and stronger meat when they are better growne, as we see 1. *Cor*: 3. 2. I fed you with *Milke*, and not with *Meat*, for hitherto ye were not able to bear it. *Heb*: 5. 14. Strong meat belongeth to them that are of full age.

So also God in correcting his weak children, dealeth with them according to their strength, as is made out in that *Similitude* *Esay* 28. 27. of the Husbandmans dealing with his *Corne*. The *Fetters* are not threshed with a threshing instrument, neither is a Cart-wheele turned upon the *Cummin*, but the *Fetters* are beaten out with a staffe, and the *Cummin* with a rod.

This is a ground of great comfort to weak, and doubting soules; God as a tender Father cherisheth, and nourisheth the beginnings of grace in them, he will not deale roughly, and harshly, but gently with them; He will not quench the smoking flax,

1 Use.

nor breake the brused Reede: but improve, and nourish *weake* beginning in his children. *Esay* 42. 3. that they may increase towards perfection.

Use.

Let us learne to imitate God in this thing, to helpe, and encourage those that are *weake*, in all good beginnings: *Rom.* 15:11 Such as are strong, ought to beare with the infirmities of the *weake*. And to comfort the feeble minded, and to support the *weake*, 1: *Thes.* 5:14.

The third
Observation
in Nature.

There are many wild Fruit-trees in the Woods, waste grounds, and hedges, that beare faire, and beautifull fruits to looke upon, both for bulke and colour, and yet are very harsh, sower, unpleasant fruits; the husbandman takes no delight to eate of them, although they are usefull for some other purposes, these are but wild un-grafted trees, and their fruits are accordingly.

This is another Similitude; and shadowes forth unto us, That,

Many Spirituall Fruit-trees bring forth faire, and specious fruits to observation, which yet are unpleasant to the Husbandman.

There are very many men in the world, being eminent in Learning, Gifts, and Parts, who can performe many workes very exactly, they can Pray, Preach, and compose Workes, &c. and these things to Observation of most, very excellently, gaining thereby great commendations from many, and (it may be) admiration from some, and yet these very fruits, to the taste of the Husbandman, are very bitter, and unpleasant, though they may be some way serviceable, and usefull to his Children, and servants, yet he himselfe, is not delighted with them, because they are from ungrafted Trees, such as are wild and Corrupt by Nature, the Principles from which they proceed is Corrupt, and that makes the fruits corrupt.

Who did workes to the observation of men, more faire and specious, then the Pharisees? and yet these their fruits were starker nought: they were but painted fruits, faire to a carnall eye, without any good tast or relish: *Luk.* 16.15. *Luk.* 11.39.

1 Use.

Let none content themselves with outward performances in the worship of God, though never so faire, and unreprouable, to the eye of men, but looke to the Principles, to the frame of the spirit;

to the spring, from with any workes flow, and examine whether they be steames from the *Divine Nature*, or from *Corrupt Nature*, in the soule, whether they be shootes springing from the *spirit of Christ*, as from the *Roote*, or from some *Morall Principle*, drawne out by some *externall Causes*, for though they are never so plausible in the eyes of men, they may be deformed in the eyes of God, and *fruits* altogether *unpleasant* to him.

Many things that are highly esteemed among men, are abominations in the sight of God: *Luke: 16. 15.*

This may serve to pull downe the high concepts which carnall and unregenerate men have of themselves, because of their *Gifts*, and *Parts*, their great and famous actings in the world, did they but see, and had they hearts to understand, and consider that bitter, and poysonous Roote, *Originall Corruption*, which staines, and spoyle all their *Fruits*, their high concepts, of themselves, and their Actings, would be much abated.

They are but apples of *Sodome*, *Splendida peccata*, glorious finnes: for while the *Tree* is corrupt, the fruit is so, *Mat: 7. 18.*

We find by experience That *Grafts*, and *stocks* joyned together of contrary, or much different *Natures*, Will not grow, nor thrive together; if they be joyned in *Grafting*, either the *Graft* grows not at all, or else very poorly, and weakly, and in a few yeares decayes, and dyes; But if the kinds of *Trees* are joyned together according to *Rules of Nature*, and *Art*, then they thrive together vigorously, and beare fruits plentifully. 4

This is another *Similitude* of the state of *Spirituell Fruit-trees*, and shadowes out unto us this *Proposition*, which also concurs with the word, and experience.

That Persons joyned in any Relation; they have comfort, or affliction together according to their *Natures*.

This is certaine, in *Nature*, *Morality*, and *Divinity*, That so much as things differ in their *Natures* one from another, so great is the degree of dislike one of another: And so neere as they are in their *Natures*, and *properties*, so great is the degree of complacency and love, one of another. *Likenesse* is both the Cause, and the Bond of Love.

This is seene in all visible Creatures, many Instances might easily be brought to shew it. *Likenesse* in *Natures*, *Manners* *Customes*, begets Love, and distance in these, causeth dislike, &c

sometimes

sometimes *Hatred*. 2 Cor. 6. 14. *What Fellowship hath righteousness with unrighteousnesse, and what Communion hath light with darknesse &c:* which *Questions* include *Positions*.

1 Use.

This should teach all who intend to enter into the state of *Marriage*, to looke well to their choice, that it be upon good grounds, and not for worldly advantages in the first place, as most do, and match a *Soule to the Earth*, betweene which there's no *likenesse*, nor proportion: Neither are they to looke so much at *likenesse* in the more low, and inferior respects, as *Person, age, birth, friends, Riches &c.* as to that great *likenesse*, in *Natures, Manners, Habits, and Principles of the Mind*, for these are the *springs, and the ties of Love*, therefore be not *unequally yoked together* 2 Cor. 6. 14. The sad experience of Many thousands, may be a sufficient warning to others.

2 Use.

If that *Love* flowes according to the *likenesse of natures*, then let this teach us to strive for *increase of Grace*, to have the *Image of God* more, and more renewed, and drawn more lively upon our soules, because the more like we are to *God*, by having his *Image*, in the *Graces of his Spirit*, the more shall we find the love of *God* towards us, and the more will our *Love* be towards *God*, the streame of the love of *God*, will flow more strongly into the soule, which will be *Rivers of pleasures*, unto it: *God* will then *delight* in the soule, and the Soule will then *delight in God*, and this *Communion* will be heaven, upon earth.

5

Observation
in Nature.

The husbandman is carefull to Engraft his Trees while they are young, he then formes, and fashions them by Pruning, and ordering of them, for he knowes when they are grown strong, and bigg Trees, these workes cannot be done so easily, if at all it be possible, therefore he sets about them while they are young-Trees.

This is another Similitude of the state of *Mysticall Fruit-trees*, and holds forth unto us this Proposition.

That *God* calls his people (for the most part) in *Youth*, and more rarely when they are old.

It is observed by *Experience*, That *God* worketh that great worke of Repentance, and Conversion of a sinner, from darkness to light before old age, generally, and for the most part: Most commonly in youth, or full strength.

How seldome has it beene seene that an old person turnes to *God*, having served *Sathan*, and his lusts all his youth, and full strength.

God

God forbid that I should limit the boundles, and infinite Mercies of God, but may it not be said in this Case, as of a *Rich man*, his difficulty of being saved: Mat: 19. 24. *It is easier for a Camell to go through the eye of a needle, then for a Rich man to enter into the Kingdome of God.*

Such are fetled on their Lees, and frozen in their dreggs, and are past feeling, their hearts are hard'ned, and consciences seared with an Hot Iron, *Custom in sinne*, hath deprived them of all sence of sinning, *they cannot cease from sinne*, 2 Pet: 2. 14. As soone may the Blackmoore change his skin, or the Leopard his Spotts, as *old customary sinners*, learne to do well, Jer: 13. 23.

They being *old ungrafted Trees*, growing upon the *stock of corrupt Nature*, its a thousand to one but they shall grow there, untill the Axe be laid unto their Roots to cut them downe, and they be cast into the fire, not to be consumed, but to burne for ever.

God gives men warning before hand, and tells them he will not accept of them hereafter, though they knocke at the Gate of Mercy, it shall be shut against them, if they will not now accept of Mercy. Prov: 1. 24, 25. *Because I have called, and yee refused, I have stretched out my hand, and no man regarded &c: yee shall cull, but I will not answer, I will laugh at your calamity, and mock when your feare cometh &c: The sinner being an hundred yeares old shall be accursed.* Esay 65. 20.

This calls to all *Spirituall young Plants*, to labour (by all possible meanes) to get this worke of Engrafting into Christ, performed *Now in their youth*, Now to be willing to be under the discipline of the husbandman, who offers, and desires to forme, and fashion their minds, according to the shape, and Mould of his holy word. Now therefore harken to his voyce while it is called to day, lest yee be hardened through the deceitfulnesse of sinne, Heb: 3. 13. The worke (as to us) is more easily done, *Now in youth*, then it will be hereafter; The Twiggs of the corrupt stock of sinfull Nature, are yet but *small*, and *slender*, and will more easily be cut off, then when they are grown *old*, and *strong*. The Minde will bow, and bend more easily *in youth*, to the Rules of the husbandman, then it will hereafter.

Things are learned *in time of youth*, with ease, which in *old age* are difficult, or impossible, There is an impossibility (in respect

I Use.



Udum & molle
lutum es; nunc,
nunc pro-
perandum, & a-
cri, singendus
sine fine rota.
Pers: sat: 3.

spect of the Lawes of nature) of altering the habits (in time of old age) either of *Body*, or *Mind*.

*Quo semel est
imbuta recens
servabit odorem
testa diu: Hor.*

Its true: With God all things are possible, but we are to expect the usuall and ordinary dealings of God, and not to neglect the *meeteſt seasons*, and *meanes*, for effecting our greatest work, in hope that God will doe it in the *most difficult times*, because all things are alike easie to him.

Now because this is a thing of infinite, and everlasting consequence, and of greatest importance (of all other things whatsoever) to us; And that *Youth* may be stirred up to seeke after this *one necessary thing*, to be engrafted into Christ, in time of *Youth*, I will lay downe a few *Considerations* as *motives* to it.

1 Consideration.
Gods Command.

The great Lord of Heaven and Earth, that gave us a *being*, our *breath*, our *time*, all that we have, he requires our *youth* to himselfe, and commands every one to give their *first*, and their *full strength* to him, he would have their *Virgin Love*, before they be vitiated, and defloured by the Creature, Eccl: 12. 1. *Remember now thy Creator in the daies of thy youth, while the evill daies come not.* As under the Law God commanded them to offer in sacrifice *Young Creatures, Bullocks, Rammes, and Lambs, of a yeare old, young Pigeons, &c.* And the *Levites* (being his portion) must be numbered from a *Month old*, and upwards, to signifie to us under the Gospell, that God requires the beginning of our strength, in his service Mica: 7. 1. *My soule desireth the first ripe fruits.*

2 Consideration.
Uncertainty of Gods call, or acceptance afterwards.

If *Youth* slight God, and refuse to hearken to his call, & command, it is uncertaine whether he will call them afterwarde, 2. Tim. 2. 25. *If God peradventure will give them Repentance.*

He that calls to men: *to day if yee will heare his voice*, hath not said, *to morrow*, or *hereafter*. I will call againe: Nay God hath said the contrary. Prov: 1. 24. *Because I have called, and yee refused, I have stretched out my hand, and no man regarded &c. I also will laugh at your calamity, and will mock when your feare commeth.*

3 Consid.
Difficulty, & bitterness, of Repentance if delayed.

The longer the worke of *conversion* and *ingrafting* into Christ, is delayed, the more difficult the worke will be, it is more easie bitternesse, of *in youth*, then it will be afterwards, while the *Twiggs and Sprouts* of *corruption* are but *young*, & *slender*, they are more easly cut off, bowed downe, or kept under, then they can be when they are *growne old, hard, and strong*, who can bend an *old strong Tree*, how hard is it to root up a tree of many yeares growth, and that in a great

great and firme Rock: Such are the *sprouts of corruption in the root, or rock of corrupt nature*. The oftner sinnes are repeated, the deeper impressions they make in the conscience, although small in themselves, *Gutta cavat lapidem, non vis, sed sæpe cadendo*.

Light, and small drops of water, falling often make an impression, even in a stone: What then will *many great, crimson, and scarlet sinnes* doe; *Many youthfull sinnes of a high nature, break the bones in repentance*.

Though it be not a *shame* to come to God in *old age*. Yet it's a shame for a man that he came no sooner. Is it not a shame for a Souldier to runne from his Commander, and fight against him all his *youthfull time*, while he hath strength, and abilities, and to come in *old age* (when he is lame and decrepite) and offer his service? Is it not a *shame* for a man to give his strength, and marrow to the Devill, and offer the dry bones to God?

4 Consider.
Shame of
comming in
so late.

What a shame is it for a man to begin to learne his Letters, & to spell at spectacle yeares? To offer the *blind, the lame, and the sicke, in sacrifice, will it be accepted?* Mal. 1. 8. Offer it now unto the Governour, will he be pleased with thee, or accept thy person, saith the Lord of Hosts.

Such as hearken unto Gods call *early, and in the spring of their yeares*, have usually most honour from God, and clearer, manifestations of his love then others, such who give God their *spring time, their Virgin yeares*, they usually know more of the minde of God, and of the *Love of God*, then others. Samuel was called of a *Child*, 1. Sam: 3. and gave God his *spring time*, and God manifested himselfe evidently to him, he had many and cleare manifestations of the Love of God.

5 Consider.
Clearer evi-
dences of the
love of God.

The Prophet Jeremy, Ch. 1. 6. was called, & sanctified from the womb, and God revealed clearly his love to him, and care of him; he became a great Prophet, and intimately acquainted with God.

God wrought upon, the spirit of Joseph, and ingrafted him while he was but a *young Twigg*, when he was but *seaventeene yeares old*, he brought forth good fruit, for he could not endure the ill doings of his brethren, but told his father of it, Gen: 37. 2. And we know what a darling Joseph was, not only to his earthly father, but also to his heavenly father, who honoured him, more then all his brethren, & revealed many *great secrets* unto him. He had not only *tasts, and draughts* of the love of God, But rather *streames and rivers* of it flowed in upon him all his life time.

21. 1. 1. 1. 1.
2. 1. 1. 1. 1.
3. 1. 1. 1. 1.

4 *Obadiah*, a man recorded in Scripture for one fearing God, & that from his youth, he was a choice, & singular man in his daies, he feared the Lord greatly, 1. Kings, 18. 12. And the love of God towards him, was scene in his love to God, and his people, in a time of great danger, in preserving, and feeding of them, for none can shew forth cleare evidences of love to God, but those who are greatly belov'd of God.

5 The Prophet *Daniel* was a Young man, when he began to feare God, Dan. 1. and God shewed him manifold cleare evidences of his love, God gave him knowledge and skill, in all Learning, and wisdom, and in all visions, and dreames, vers. 17. He had cleare revelations of the love of God in his Prayers, and Praises to God, immediatly by his spirit, and mediately by an Angell, who was sent to tell him that his prayers were heard, and that he was a man greatly beloved.

6 The holy Prophet *David*, of a young Twigg was ingrafted into Christ: and he made God his trust from his youth, Ps: 71. 5. 17. Being taught of God from his youth, Ver. 17. and thereby made a man after Gods own heart: And whoever had sweeter communion with God (and consequently clearer evidences of his Love) then he expresseth in his Psalmes.

7 How great a Prophet was *John the Baptist*, who was filled with the Holy Ghost, and sanctified from the womb, a greater Prophet was never borne then he, Luk. 1. 15.

8 *John the beloved Disciple*, began to follow Christ, Early in his youth; and Christ revealed secrets to him more immediatly then to the rest of the Disciples. He leaned on his breast, and lay in his bosome: he attained to a full assurance of the love of God (which is the Consideration I here hold forth) it is frequent in his Epistles,

1. Joh. 4. 13. 14. We know we are of God, We know we are in him, we know we are translated from death to life, &c. We know, we know, we know, many

2. Jo. 3. 14. 24. such passages of assurance he mentions.

If Christians desire to enter into Heaven, while they are on earth, this is the way, even to get into Christ early, as soone as may be.

So we see: such as are Ingrafted into Christ, while they are young the love of God is more clearely, and evidently discovered to them, and secrets from God, are revealed to them, (usually) more then to others.

And

And lastly: Such as are Ingrafted into Christ *early, in the spring of their yeares.* Such commonly attaine *large growths, & measures of grace,* if they live long, and enjoy meanes, and helps suitable: A small measure of grace, though but as much as a *Graine of Mustard seed,* If a man begin with it betime, and husband it well, according to the Counsell, and wisdom of the spirit, will improve, and grow in many yeares, to a *large measure, their Brook will become a River, and their River will become a Sea.*

Every *Act of grace* adds something to the *habit,* so that the *habits of grace* are mightily confirmed by their frequent operations: Such when they come to be *old Disciples, strong men in Christ, fathers,* they have *strong consolation, full assurance.* Their graces increase from *strength to strength, from glory to glory, by the spirit of the Lord.* 2. Cor. 3. 18.

And the more their *Afflictions* abound, the more are their *graces increased,* being improved by the spirit of God: and consequently the *greater glory,* is laid up for them in the life to come, 2. Cor. 4. 17.

Now let it be considered. What infinite advantages arise to a Christian by *Early beginnings,* and setting forward in the waies of God *betime,* the *Priviledges* are exceeding great, and many.

And therefore let these things be *Encouragements* to all young *Plants* to labour for them.

We know at the end of Sommer (the sunnes influences being withdrawn in a great measure) *Fruit-trees cease growing, their fruits, and Leaves fall off, and decay, & during the time of winter, are shaken with winds, pinched with Frosts, and cold weather, and seeme (to those that cannot well judge of them) to be even as dead, which yet when the spring of the yeare comes, the spirit, and sap (that is naturally existing in them all winter) is refreshed againe by the heat of the sun, that then approaches, the branches againe beginne to bud, and by new supplies from the root grow forth, and beare store of wholsome fruits.* Observation in nature.

This is another *Similitude,* and shadowes out unto us this Proposition. (Which also concurreth with the word, and experience.) That

When the spirit of God withdraws, then mysticall *Fruit-trees cease growing, their Leaves, and Fruits fall, and they indure sore conflicts for a time, but at the returne of the spirit, they are restored to former comforts, with advantage.*

As the *sun* is the *efficient cause* of life, and growth in *naturall fruit-trees*, & all *Vegetables*, so is the *spirit of God* the *efficient cause* of motion, and growth in all *spirituall fruit-trees*; while the spirit is sensibly present, & works in the soule, there is *motion & growth, budding, blossoming, and bearing fruits*: but when the spirit withholds, and withdrawes, when this *sunne* goes a far off, (as to his sensible workings, and effects) and hides his face, then the *fruit-trees* are at a stand, and have no power in themselves to grow, or beare fruits. The Lord is a *Sun* unto his people, *Ps:84. 11.* and the face of this sun is sometimes clouded, & hid from them, & is as if he were a far off *Esa 54. 7. For a small moment have I hid my face.*

The Church complains in the time of this spirituall winter, *Cant:5. 6. My beloved had withdrawne himselfe and was gone,* When this *Sun* is a far off, and clouded, then followes a dark, and gloomy time: *Lam:3. 1. I am the man that have seen affliction by the rod of his wrath, he hath led me, and brought me into darknesse, and not into light. I remembered God, and was troubled, I complained, and my spirit was overwhelmed, Ps:88. 16. Thy fierce wrath gather over me, thy terrors have cut me off. Ps. 38. 8.* The Church in this long, & sharp winter (the sun being a far off) complaineth bitterly, and is almost in dispaire, *Esa 49. 14.*

This is a wofull state, the greatest of all miseries on this side *Hell*, even the want of the light of Gods countenance to him that hath sensibly enjoyed it, a long time together, & instead thereof to have the *terrors of God* fight against him, and make immediate impressions upon the soule; yet so it is with some of the servants of God for a time.

Former *Evidences* are then of no more strength, then the strength of *meat and drink* is to the body, after a long time of *fasting*, when the body hath been shut up in prison, & almost starv'd for want of food.

Its true indeed: former *Evidences* might something uphold in the sense of present distresse, if the soule were sure they were *undoubtedly true, & sound*, because we know true grace once received cannot be lost, but there lies the doubt, and the ground, of feare, and distrust, he calls all former *Evidences* into question, and perhaps (at some times) concludes against himself, that all are nothing, because of present feelings of the contrary.

I know a man who (about six years agoe) was cast under this
Tem-

Temptation, and had Experience of this woefull state, and condition, he lay in it for the space of *Seaventeene, or Eightene Months*, or thereabouts.

Having early, in his youth (even the first houre of the day) passed through the pangs of the *new birth, and spirit of bondage*, and afterwards enabled to lay hold on Christ by faith, & by degrees, got up to a comfortable well grounded confidence of the love of God in Christ, wherein he walked chearefully many yeares together, yet afterwards (about the middle of the day, according to the Prophets computation Psalm. 90. 10.) the Sun was clouded, and the *spirit, and sap* suspended, soe that (by degrees) he lost not only the *sence of the light of Gods countenance*, towards him, & the *sight of the graces of his spirit*, but questioned all his former *Evidences* of his interest in Christ, and (especially at some times) even gave all for lost.

And notwithstanding the daily use of all spirituall meanes, he still fell lower, and lower, more, and more feares, & terrors increased in him, which were made more sharp, & heavy, by many *outward afflictions, great Crosses, and disappointments* at the same time, which beset him in reference to his *body, name, outward estate, Calling friends, and relations*, every one of which was a sore affliction, single and of it selfe: notwithstanding all came upon him in a short space, & that not long after great, (and more then ordinary) *spirituall comforts, & evidences of the love of God in Christ*: which though they might have beene some ground to have up held the soule from sinking so low, yet by degrees, were all weake, and of no power to uphold amidst such a throng, and present sence of heavy, and lasting Temptations as were upon both his *inward, & outward man*, but by reason thereof the immediate succeeding *desertion* was the more sensible, & tooke the deeper impression: As a man that falls suddenly from a high and eminent Condition of outward comforts, into great misery, and want, the sence of his present miserie, is therefore the more pressing.

In this *sad, and darke time*, he laboured (by *Prayer, Fasting, help of friends*, and all waies of humbling himselfe) to get comfort, and support, but still it was hid from him, he was (by degrees) cast downe very low, and brought even to despaire, inso-much that at some times (through the violence of Temptations, and apprehensions of the absence, & losse of God) he cryed out, & rored

as a man in torment of body, that had had some, disease, or burning in his Bowells: At some times when he heard the word preached, such terrors seased upon him, that he had no rest, neither in body, nor mind; he could neither sit still, nor stand still, nor rest in any posture, fearefull injections thronged in upon him, and such woefull apprehensions of an undone Condition, were (at those seasons especially) represented to the mind, that he is not able to expresse the horror of them.

And after a certaine time of the absence of the Spirit, in the feeling workings of it, and sence of the graces; Corruptions (at sometimes more especially) grew strong, Passions and murmurings against the righteous proceedings of God with him (and Corruptions also of other Natures) brake forth from time to time, which were a sting to all other Miseries that be fell him, and which were (being improved, and strongly set on by Sathan against him) grounds & foundations of the most fearefull apprehensions that came into his minde: The enemy pleading it against him, (and that from many grounds of Scripture misapplied) that no child of God did ever fall into the like, and labouring to perfwade him that no one guilty of the like should possibly ever recover out of such a state.

This was a long and tedious winter, in which seldome any sunne, or starrs appeared to him, and then but dimly, and soone clouded againe: the soule was (for the most part) filled with stormes, and tempests, sad apprehensions of many present evils, and feares of more, and worse to come upon him: (The particuler passages of which Condition, might be related at larg, were it convenient.)

But the Lord hath said, *he will not contend for ever, neither will he be alwaies wrath, lest the spirit faile before him; He correcteth in measure:* At length the sunne of righteousness beganne to arise with healing in his wings, and to cast some beames of light into his darke soule, which increased more & more unto the perfect day: As he fell by degrees, so by little, and little, (after a time) in the use of meanes, he was raised up againe, and restored to former comforts, with great and many additions and advantages.

The Lord put a new song into his Mouth, even praises and thanksgivings unto his God; Let the father of mercies and the God of
all

all Comforts be for ever praised, for he comforteth those that are cast downe, when they cry unto him in their troubles, he delivereth them out of their distresse, he bringeth them out of darknesse, and out of the shadow of death, and breaketh their bonds asunder.

O that men would therefore praise the Lord for his goodnesse and declare the wonders that he doth for the children of men.

Now therefore: Seeing that a winter of desertion may come; Let us wisely prepare against it, by giving all diligence to make our Calling and Election sure: 2. Pet: 1. 10. *To lay up Treasures in heaven:* Now in the time of plenty, to store up against a time of famine, to gather now in Summer against a spending time in Winter: Now to gather Evidences, and sure grounds of the unchangeable love of God towards us, to make sure of our interest in Christ, that so we may be able to fight, and conquer, and to stand in the evill day, and having done all to stand, Eph 6. 13.

1 Use.

This also may comfort all those that are in this case, who find that the Sunne is withdrawne: and gone as farre off, Let them (in the use of all good meanes) wait and tarry the Lords leaseure, he will certainly come in his time, Esay 50. 10. *Who so walketh in darknesse and hath no light, let him trust in the name of the Lord, and stay himselfe upon his God, for the Sunne will againe shine forth and refresh such a soule, and though comfort, and deliverance tarry, yet waite for it, it will surely come it will not tarry, Hab. 2. 3.*

2 Use.

The word, and promises, and the Experiences of performance to others, are sure grounds of hope; Esay. 54. 7. *for a small moment have I forsaken thee, but with great mercies will I gather thee, in a little wrath I hid my face from thee for a moment, but with everlasting kindnesse will I have mercy on thee, saith the Lord thy Redeemer.*

The time is at hand when it shall be said to these weather beaten fruit-trees, the Winter is past, the Raine is over, and gonne, the Fig-tree putteth forth her greene figgs, the Vines with the tender Grape, give a good smell Cant: 2. 11, 13.

Then shall they Bud, and blossome, and bring forth abundance of Fruits pleasant to the husbandman, And shall say unto him, *Let my beloved come into his Garden, and eate his pleasant fruits:* Cant: 4. 15.

They shall dayly bring forth the fruits of Praise, Love, and obedience which he will like, and accept of.

7
Observation
in Nature.

Fruit-trees that bring forth the fairest, and most beautifull blossomes, Leaves, and shootes, they (usually) bring forth the fewest, and least fruits, because where Nature is intent, and vigorously pressing to do one worke (spending its strength there) it is at the same time, weak about other works: but distinct, and severall works of Nature, in moderate, and remisse degrees, are all promoted, at the same time.

This is another *Similitude*, &c: whence we learne; that,

Generally those persons who are excessive, and most curious, about the Formes of duties, have least of the power of godlinesse.

There are some who (wanting sincerity) lay out their thoughts, and endeavors about the *outside* of duties, they will be as forward (it may be) as any, about the *externall* parts of worship, who have nothing of the *truth* of Grace in them: Much formality, little, or no sincerity.

The *Pharisees* were excessively careful, about the *outside* of Gods worship: *Mat. 6. 2. 5. 16.* In Preaching, Praying, fasting, giving Almes &c: their care was mainly to make cleane the *outside*, to carry things fairly to the world, that they might have the praise of men: broad *Phylacteries*, long Prayers, exactnesse in tithing *Mynt, Annis, & Cummin*: Strictnesse in observing the *Sabbath*, & outward Ceremonies, but where was sincerity all this while, they had the forme, but wanted the power of Godlinesse. These were but *Leaves, buds, or blossoms*, but noe *Fruits* they were not profitable to them, as to *Eternall* advantages. *Mat. 5. 20.* Except your righteousness exceede the righteousness of the Scribes, and Pharisees, yee shall in noe case enter into the kingdom of heaven.

So it was among us of late yeares, bowing at the Name of *Iesus*, and *Communion Table*, *Surplesse*, *Common-Prayer* &c: these and such like were pressed with all eagernesse, and stricktnesse.

The *Body of Religion* was larg, and monstrous, but without a soule, or if any, it was *Leane, and feeble*.

These kind of persons are like the *Indian Figg-tree* that *Pliny* speakes of, which had *Leaves*, as broad as *Targets*, but *fruits*, no bigger then a *Beane*.

1 Use.

Let every one take heed of this, and not suffer their spirits, and endeavors to runne out, and be spent, about things of lesser moment, and neglect the greater.

This

This is a foule fault among us at this day, some men stand more about the *formes* of worship, then about the *power* of it, they looke so much after the *way*, *manner*, and circumstances, that they almost loose the *substance*, things which are but as *husks*, or *shells*, to the *Kernels*, or as *Leaves*, in respect of *fruits*.

Some others labour more for *Gifts*, then for *graces*, for *humane Learning*, then for *holinesse*: All these are guilty of the same folly, as those who take more care about the *shape*, and *fashion* of the *Garment*, then the *health*, and *soundnesse* of the *body*; Or (to use the Metaphor in hand) they bring forth *Leaves*, instead of *fruits*, and so are *unprofitable Trees*, lyable to Gods displeasure, and cutting downe, every moment: and also to be accompted by *discerning Spirits*,) to be such as have little, or nothing, of The power of godlinesse.

The Fruits of Trees discover plainely of what kind, the Trees are: 8. *Observa-*
the Leaves, and Blossoms, (especially of some kinds) may deceive us, tion in Na-
but the fruits cannot deceive us, but shew painly of what Nature ture.
the Trees are.

From this Oblervation we learne: That

By the Fruits of Spirituall Trees, wee may conclude the Nature of the Trees.

The *wayes*, and *Conversations* of men discover what their *Natures* are: If men of discerning Judgments will but exactly observe, and try the *Actions* of others, they may (by degrees) conclude from what *Principles* they act.

Its true indeede: from the *Actions*, and *wayes* of some persons, a man cannot easily conclude this, *Vices* in some are clothed in the *habits* of *Vertues*, howsoever of some others this is more cleare. The *worke* of *grace* in the hearts of some is so cleare, and apparent in their lives, and *Conversations*, that if men will but judge according to *Scripture Rules*, the worke will be manifest: So on the other side concerning *Profane*, and *scandalous persons*, a man may without breach of charity conclude such persons to be (at present) in the *Gall* of *bitternesse*, and *bond* of *iniquity*.

And though *Formall Professors* may for a time deceive us, by their *Leaves*, and *blossoms* of good words, *shewes*, *Professions*, *Formes*,

and outward observations, Wolves may have on Sheeps clothing. Yet if we tast, and observe their fruits, after a time we shall know them, *Mat: 7. 16. by their fruits yee shall know them.* So againe, *Luk. 6. 44. Every tree is knowne by his own fruit.*

1 Use.

This should teach every one to try their owne fruits, by the word of God: for thereby will be comfort to them that feare God, they may have continuall grounds of rejoycing when they observe their fruits to be good, to be such as the husbandman calls for, and approves of; they may thence conclude that they are *Trees of the Lords planting, Engrafted Trees*, and this is a ground of joy indeed, to know our *names are Written in heaven*. And here also will be grounds of conviction to *unsound Christians*; for by a certaine knowledge of the *Fruits*, they may have a certaine knowledge of the *Trees*. And therefore; let such give themselves no rest, untill they find the nature of their *fruits* changed, whereby they may conclude, that the nature of the *tree* is also changed.

The through, and serious consideration of this Proposition, may be a speciall meanes to support, and latisfie the spirits of Gods people who are in a doubting condition, and question the truth of their graces; for let such consider, that hereby they may receive the best satisfaction that beleivers can possibly receive, (next unto the immediate testimony of the spirit of God) to look upon, and try their fruits by the word, for fruits are infallible evidences of the nature of the Tree, that brings them forth. Therefore observe; if these, and such like fruits are brought forth, the Tree is certainly good, an ingrafted Tree. If there be fervent desires, pangs, and breathings of the soule after God, delight in the word, and ordinances, Love to God, and his people, secret goings out of the soule after, and closing with spirituall things, disliking and hating corruptions, and what soever is against the minde of God, and opposing of it, with a rising of spirit against it, with zeale, and indignation, if there be a secret joy, and cheerefulnesse in the spirit when things goe well with the people of God, when holinesse, and the power of godlinesse is like to be set up, promoted, and encouraged, and sin suppressed: if the spirit be stirred to pray against the dominion, and power, of wicked, & unregenerate men, not only such as are prophane, but also such as are but morallly honest, though they be accomplisht with the utmost of naturall and morall endowments, prising and preferring sincerity, and holinesse

holinesse in any person, before all gifts without grace.

These fruits (I say) are reall and infallible evidences of a good tree, of a Tree ingrafted into Christ, and that soule that finds them in it selfe, (if the spirit of God shine upon them, and shew them) may as certainly conclude upon the truth of grace there, as if an Angell were sent from God to tell such a one, that he is belov'd of God.

It is as possible in nature, for Thornes to bring forth Grapes, or Thistles, Figgs, as for a bad Tree (a person out of Christ) to bring forth these fruits. Let not such soules (therefore) so dishonour God, wrong themselves, and gratifie Sathan, as to question the truth of grace in themselves; but rejoyce evermore, because their names are written in heaven. Hereby We know We are translated from death to life, because of these fruits, 1. Jo. 3. 14.

The Branches of fruit-trees if cut off, and stuck in the ground, they will (in the spring) Bud, and Blossome, and be as forward as the Boughs that grow upon the stock, or root, and will seeme to grow, but when the sun drawes neere, and the weather growes hot, these boughs beginne to decay, and wither, they cannot indure heat, they within a while, shew that they want a root. 12 Observa-
tion in nature

This is another Similitude of the state of spirituall fruit-trees, and shadowes out unto us this Proposition.

That some persons flourish with a profession for a time, but in the heat of affliction they fall off.

Many Christians will flourish with a profession in the time of prosperity when many showers of blessings, and outward comforts fall on them: but when the hot sunne of troubles, and afflictions be- ginnes to scorch, and the dewes and raine of temporall blessings are taken away and withheld, then they shew themselves to be but as Boughs stuck in the ground, and without roots, which Bud and Blossome, but can bring forth no fruit.

These are they spoken of in the Parable, Luk. 8. 13. The seed that falls upon the rock, springs up as well (it may be) as that on the good ground, but when the sun growes hot, it scorcheth it, and it withers. Mat. 13. 21. He hath no root in himselfe, but endureth for a while, and in time of persecution he is offended.

Such the Apostle speakes of 1 Jo. 2. 19. They went out from us, because they were not of us &c.

1 Use.

This shewes us the end of *Hypocrites, formall professors*, who have no root in *Christ*: such as are not really ingrafted into *Christ*, they will certainly fall away at last, none can persevere, but by being in *Christ*. Job. 27. 10. *Will be (the Hypocrite) alwaies call upon God. Every plant which my heavenly father hath not planted shall be rooted up.* Mat. 15. 13.

2 Use

This being so, it should make every one give all diligence to be fully assured, whether they be but as *Boughs stuck in the ground without roots, or Branches of the true Vine*, Joh. 15. 5. Such as are really ingrafted into the *true Vine*, the hottest sunne of persecution can never hurt them, the gates of Hell shall not prevaile against them. Such shall be as a *Tree planted by the waters, that spreadeth out her roots by the River, and shall not see when heat cometh, but her leafe shall be green, and shall not be carefull in the yeare of drought, neither shall cease from yeelding fruit*: Jer. 17. 8.

10 Observat.
in nature.

Wee seek for the best kinds of fruits to engraft in our Orchards, we are carefull, and diligent with much labour, cost, and time, to obtaine the most usefull, and most profitable fruits; though we take some paines for ordinary kinds, yet we especially desire the best fruits.

From this Observation we are taught: That

We should bend all our desires, and endeavours, that the best gifts, Graces, and Fruits, may especially increase.

The Apostle saies, 1. Cor. 12. *There are diversities of gifts wrought by the same spirit*, all of them desirable and profitable, but some are more profitable then others, which he exhorts us to looke after, and desire, especially Vers. 31. *Covet earnestly the best Gifts.*

There is a precellency, and greater worth in some Fruits then in some others, 1. Cor. 13. *I will shew you a more excellent way.* And Phil. 1. 10. *That yee may approve things that are excellent or (as some read it) things that differ. Follow after charity, and desire spirituall gifts, but rather that yee may prophesie,* 1. Cor. 14. 1. And Vers. 12. *For as much as yee are zealous of spirituall gifts, seeke that yee may excell to the edifying of the Church.* He preferres one grace before another; And now abideth faith, hope, and love, these three; but the greatest of these is love. 1. Cor. 13. 13.

This

This reproves those who content themselves with the *lowest, and meanest gifts, graces, and fruits*, and strive not after the *best, and chiefest*. Many having gotten some competent abilities, they goe on in a formall way, running in a round, or Circle, making little, or no progression at all, no increase, or growth. Yea, sometimes for want of *exercise, and improvement* of their Gifts, they loose what they had, and become very *Drones, and Dunces*.

1 Use.

We should consider, and examine which are the *best gifts, graces, and spirituall fruits*, that so we may apply our selves to gaine, and increase them *especially*.

2 Use.

First then: Such are *best, as are most usefull and profitable to our selves and others*.

Profit and edification, is the great end why the spirit of God gives gifts, 1. Cor: 12. 7. The Apostle valued those gifts most, which were most for *Edification*. 1. Cor: 14. 19. *I had rather speake five words with my understanding, that by my voice I might teach others, then 10000 words in an unknowne Tongue. Knowledge, Tongues, humane Learning, and parts, are little worth, unlesse they be used to edification.* What then shall we thinke of those men who use them for *ostentation, and to gaine admiration*.

Secondly: If we find any gift, grace, or spirituall fruit commended to us in *speciall and particular* in the word, such hath the highest commendation that possible can be, as the gift of *Prophecie* above other gifts, 1. Cor 14. 1. *Desire spirituall gifts, but rather that yee may prophesie: Which is a gift to be able puliquely to expound the word of God, and to apply it to the edification of the Church,*

Diod. Annot.

And of *Graces, Love is the chiefest*, 1. Cor: 13. 1. *Now abideth Faith, Hope, and Love, these three, but the greatest of these is Love.* And 1. Pet. 4. 8. *Above all things have fervent love among your selves.* So for *Meeknesse of spirit*, God himselve commends it to us in particular, for a most speciall fruit, 1. Pet. 3. 4. *The ornament of a meek and quiet spirit, is a thing with God of great price.*

R 3

Thirdly:

Thirdly: Those graces wherein wee most resemble God the father, and Christ: such are most excellent, as *Love, Mercy, humility*: we are cald upon (as might be shew'd at large) to imitate the father, and the sonne, in these things especially; What is more sweet, & amiable in the Conversations of men, then *Love, Mercy, humility*: these are *Graces, and Fruits* of highest esteeme both with God, and men.

Such as hold forth Truths in publique, should bring forth the best *Fruits*, in expounding, and applying the word, they ought to lay open those truthes that are most suitable to *Persons, times, occasions*: and decline other things of lesser moment: and (in particular subjects) to bring forth those things that doe most naturally arise from the word, according to the genuine sense of it, without straining, or wresting, (there being such infinite variety of matter) that it may be as the first, and purest *Liquor of Grapes*, (or as *life hony*) that runnes without straying, which is (by far) the best.

Men should stand most upon the *Essentials* of Religion, and Christianity; How to get an interest in Christ, and then how to improve it, to grow in grace, to subdue Corruptions, how we may get, and maintaine a constant, habituall Communion with God.

And for our Meditations, Speeches and Actions we must still looke at the best, if there be many, and various duties before us, and all cannot possibly be done, we ought to set our selves to consider, and find out which are most convenient, most necessary, most profitable, and best. And accordingly apply our selves thereto; and not to goe (hand over head) to any of them, upon this ground, for that it is a good worke, it is our duty, for so perhaps we shall neglect a more excellent, and more profitable worke, and misse of the best, and choicest *Fruits*.

14. *Observation in Nature.* We finde by experience, that after a Plant is engrafted, both the Graft and the stock will shooke forth, & if the Graft grow vigorously, and strongly, when the shoots of the stock are but weakke, but if the shoots of the stock break out strongly, then the Graft grows but weakly, therefore the husbandman takes paines often to cut off the shoots that grow upon the stock, that so the Graft may Grow the better.

This is another Similitude of the state of Mysticall Fruit-trees, and shadowes forth unto us this Proposition. That.

While

While the Spirituall part in us acts & growes strongly, the fleshy part acts but weakly; See also, if the flesh be strong, the spirit is weak.

In all persons Regenerate, there are *two Natures* the one contrary to the other, the *Spirit*, and the *flesh*, the *new man*, and the *old man*, the *Divine Nature*, and *Corrupt Nature*: these two *Natures* abide in us, and act in us, soe long as we live, in this earthly Tabernacle: and they strive one against the other, soe that it is the care of the husbandman, and is, or should be our continuall labour, and businesse to strengthen the *spirituall part*, against the *fleshy part*.

We find by *Experience*, That while the *spirituall part* acts lively, and strongly, the *Carnall part* is downe; While it is by the Spirit of God, raised up to a high pitch, and enlarged with delight, and joy in God and Communion with him in *Meditation and Prayer*, then all the while Corruptions are low, and weak, and (as it were) subdu'd.

The Apostle tells us what we must doe to keepe down Corruptions: *Gal: 5. 16. This I say, walke in the spirit, and yee shall not fulfill the lust of the flesh.* While the soule is in a spirituall frame, and hath cleare apprehensions of the love of God in Christ: then it is active, and lively in all the waies of God, though the flesh, be as a strong man Armed, yet when this spirituall man, (that is stronger then he) riseth up, and bestirs himselfe, he is able to bind him, and keepe him under, and rules in the soule, untill there be an abating, and slackening of this spirituall strength, and then the flesh will soone discover it selfe, and stirre, and act, as temptations, and occasions arise, and then on the other side, the *Spirituall part* acts but weakly, it is downe, low, flat, wanting life and power, during such stirrings, & workings of the flesh. *Rom: 7. 23, I see a Law in my members warring against the Law of my mind, and leading me captive: &c.*

This should teach us often to observe, and take notice of the *1. Use.* *actings of our spirits*, of the frame and temper of them, whether the *stock*, or the *Graft* bud the faster, what shootes the soule puts forth, of what kind, what the motions of our soules are, whether *holy and spirituall*, or *carnall, and earthly*: cutting off these, and preserving, and cherishing those.

If we were watchfull daily, and tooke paines with our spirits

to keepe them up in a spirituall frame, in Communion with God, then (by degrees) the shootes, and growthes of the spirituall part, would become strong, and the shoots of the flesh weak and feeble.

O that this were well weighed & practised by Christians, it is the very life, Spirit, and power of godlinesse: thus to walke with God, in Communion with him: hereby we are enabled to doe, and suffer all things for God, and to resist, and keepe under the flesh and all Enemies: *This is the life of our life, and heaven upon Earth.*

12. *Observation in Nature.* *The neerer the Branches of a Tree are to the Roots, the faster; and firmer they are, and more free from tossing, and shaking by the Winds: Such grow more fast & steady, And the further off the Branches are from the Roote, the more loose, and unstedfast they are, the more they are waved, and tossed by the Winds, and motion of the Aire.*

This is another Similitude of the state of spirituall Fruit-trees, and shadowes out unto us this Proposition. That,

The more closely a Christian walks with God, the more steadfast he is, and more free from spirituall Enemies.

Every Mysticall Fruit-tree that beares good fruit is Ingrafted, or implanted into Jesus Christ, the Roote, and Stock, from whence all the spirituall sap, and life, is drawne and derived, whereby the Branches grow, and beare fruit.

And experience shewes, the neerer the Boughs and Branches are unto the Roote, the closer we walke with God, the more Communion we have with the father, and with his sonne Jesus Christ, the more fixed, stable, and unshaken we are.

When the soule is as farre off from Christ: it is carried, and tossed about, with divers, and strange concepts, and Opinions, is moved this way, and that way, as the top branches of a Tree with the wind. The Prophet David walked with God, and kept close unto him. *Psalm. 16.8. I have set the Lord alwayes before me, he is at my right hand, I shall not be moved, therefore he saies, his heart was established, and would not shrink, but was enabled to insult over all Enemies, Psalm. 46.2. I will not feare though the earth be moved, &c.*

Use. 1.

As this shewes us the happinesse of those who walke with God, so also we may hence see the miserable Condition of those who

who are out of Christ: the whole frame of their soule is unsetled; they are like the raging sea that cannot rest: *Esay: 57. 26.* their Condition is as was said of Reuben, *Gen. 39. 4.* unstable as water.

James. 1. 8. They are unstable in all their waies.

Let this stir us up to a watchfull, and circumspect care in our 2. Use. Conversations, to get, and keep close to Christ. Such as walke closely with god, live in another sphere, in a higher Orb, then the common world, though they live with them: And notwithstanding there be Commotions, and stirs, and turning of the world upside downe, yet in the spirits of these, all is calme, and quiet, their hearts are fixed and unmoved: they feare not evill tydings, *Psal. 112. 7. 8.* because their hearts are fixed, trusting in the Lord. *Psal. 15. 5.* They are as Mount Syon that cannot be removed, but abideth fast for ever.

In Materiall fruit-trees the sower Nature of the wild Plants that are Grafted upon, does still continue in the stock, or Roote, and is not taken away, or lost by Engrafting, it is only restrayned, and kept under by the Graft. The Nature of the Graft is predominant in the Tree, & overrules in bringing forth fruite, according to its own kind, (although with some small degree of the sower Nature of the stock mixed with it) And the two Natures of the Graft, and stock continue mixed together, so long as the Tree lives.

13. Observation in Nature.

This is another Similitude of the state of Mysticall Fruit-trees, and shadowes out unto us this Proposition.

That Corrupt nature abides in every beleever as long as they live, and is but in part subdued by grace.

Corruption of Nature though it be not cast out, yet it is by degrees, more and more subdued, restrayned, and kept under, *Rom. 6. 6.* The old man is crucified with him, that the body of sin might be destroyed, it is destroyed as to the ruling power of it, but not as to the being of it.

The spirit of God working Principles of Grace, or the Divine Nature in the soule does curb, restraine, and (as it were) bind Corrupt Nature, which of it selfe is as a strong man Armed, but when a stronger then he cometh, he bindeth him, & keeps him under, *Luk. 11. 21.* Not that he casteth him out, as a Land-lord, that turne out an old Tenant, when he puts in a new one: The Apostle complayneth

of it Rom. 7. *I find a Law in my members warring against the Law of my minde, &c.* The experience of all Beleevers proves this sufficiently.

1 Use

This should humble us greatly, seeing we carry about with us continually, this *pricketh and in our bosomes*, this grand enemy of God, Of all the *Arguments of humiliation*, this is the greatest of all, this comprehends all.

2 Use

We should admire the infinite love of God to us, that notwithstanding *Corruption of nature*, hath delight in his people.

3 Use

This should make us continually watchfull against this close deceitfull enemy, least it insnare us, and prevaile against us; it prevailed against *David, Solomon*, and the most holy men; how then does it concerne us to watch.

4 Use

Let us labour for increase of Grace, for as that growes, *Corruption* wasteth, or is kept under.

5 Use

The *abiding of corruption in us*, should make us long for the glory that is to be revealed, when there will be a full deliverance from *Corruption of nature*, and all the effects, and consequences of it.

14 Observa-
tion in na-
ture.

It is not the talenesse, nor largenesse, nor any outward beauties in fructrees, that makes them valued, but it is their *natures*, and properties in bringing forth good fruits.

This teacheth us: That,

It is not any outward excellencies, but the Image of God upon the soule, that is the glory of a person.

Whatsoever hath any likenesse, or resemblance of God, is beautifull, and has a glory upon it, and by how much neerer it drawes to God in likenesse, so much more glorious it is.

Grace or Holinesse makes Creatures beautifull and glorious, in the eyes of God.

Israel was chosen to be an holy people unto the Lord, Deut. 7. 6. and this was their glory, Deut. 26. 18. they were high above all nations, in praise, and in name, and in honour, &c. This was their wisdom, and understanding, and praise in the sight of the Nations, Deut. 4. 6. They said of them, surely this great Nation is a wise and understanding people, &c. This was their beauty, their glory, Deut. 10. 21. He is thy praise, &c. A hoary head is a Crowne of glory: but when? Even when it is found in the way of righteousness, Pro. 16. 31. Yea This

spiritual

spirituall wisdom in a young head, is a Crowne to it. Prov. 3. 3. All the things thou canst desire are not to be compared unto her.

This shewes us the blindness, and darknesse of unregenerate mindes, who see no brightnesse, nor glory in the sun, no beauty in holinesse, or the Image of God; Nay, who rather account it a disparagement: They esteeme no more of this glory, then they did of our Saviour, the Lord of glory, who in a carnall eye had no forme, nor comeliness, no beauty in him that they should desire him, Esay, 53. 2. These persons glory in their shame, and are ashamed of that which is true glory.

Oh Let us labour after this glory, which is more to be desired then gold, yea then much fine gold, Pl. 19. 10. That which the world accounts glory, is but a shadow of glory to this. This excelling that infinitely more, then the light of the sun excelleth the light of a Candle, or of a Glow-worme: This is the Diamond in the Ring, the Jewell in the Casket, the Treasure in the field, to buy which a wise Merchant will sell all that he hath.

In Materiall Fruit-trees there is a close, and firme knot between the stocke, and the graft, whereby they are joyned fast together, and made one body; which knot, and conjunction continnes, and holdeth fast, as long as the trees live.

This Observation shadowes out unto us That There is a firme and constant union between Christ, and every Believer.

All Beleevets are implanted, or ingrafted into Jesus Christ, the same Kins or Stocke, and by this ingrafting there is a firme knot, or tie between the stock or root, and the Branches, which holdeth for ever, Rom: 6. 3. We are planted together, &c. & Rom: 11. 24. We are grafted contrary to nature into a good Olive Tree. So also, 1. Cor. 6. 17. He that is joyned to the Lord, is one spirit. This union, or true-loves-knot, is made by the spirit on Christs part, and by faith on ours wrought by him.

This shewes us the sure, and safe condition of every believer, they shall never fall away, Christ will not loose one of his members. Their enemies shall never be able to prevaile against them, in fighting against them, they fight with God, they scorne themselves against Christ, & say, *Sant, Sant, why persecutest thou me?* And thus they strike at the very face of God, and at the most tender part, Zach: 3. 8. *He that shall touch you, shall touch the Apple of his eye.* So that God will certainly preserve his people.

2 Use. This is a ground of solid comfort to every beleever: they stand in the neereſt Relations, and ties to Chriſt that poſſible can be: *As Branches to the root, or ſtock; as a peculier people to a faithfull God; As friends to Chriſt; as Brethren to Chriſt; as Heires and Co-heires with Chriſt; as children to a father, as a Wiſe to the husband, as members to the head.*

2. Cor. 6. 16.

1. Pet. 2. 9.

Jo. 15. 14.

Jo. 20. 17.

Rom. 8. 17.

Cant. 4. 7.

Eph 3. 30.

And this Union once made, is ſure for ever.

3 Use. Let us priſe the Priviledges of this union, that ſo we may enjoy the ſweetneſſe of it: *Walking with God, light of his countenance, communion with the Father, and with his ſonne Jeſus Chriſt, &c.*

4 Use. Seeing we are joyned to Chriſt, what manner of perſons ought we to be in all holy converſation.

16 Obſerv. in Nature. Fruit-trees are not to be permitted to grow old in Nurseries, but being ingrafted and prepared (in certaine yeares) for Orchards, and fields, ought to be tranſplanted; ſave only ſome few, here and there one, of the beſt kinds, whereof to gather graſts for the young plants.

This ſhadowes out unto us: That

Univerſity men ought (in convenient time) to goe forth into the ſervice of the Church, & Commonwealth, except ſome choice perſons, ſit for Government of the Societies.

As Materiall Nurseries are for the increaſe and multiplying of Fruit-trees, where they are prepared (in certaine yeares) for Orchards and Fields: So Univerſities, or Myſticall Nurseries, are for the inſtruction, and diſcipline of youth, that they may be uſe-fully, and fruitfull Trees, when tranſplanted abroad into the Church of God.

If Fruit-trees in a Nursery (where there are ſuch multitudes in a little compaſſe) were permitted to grow there many yeares, they could not poſſibly ſpread, nor enlarge their Branches, whereby they might beare ſtore of Fruits; but would fret and gall, and rub off the Barke, Bloſſomes, and Fruits, of one another.

So neither is it poſſible for multitudes of Students in a Univerſity, to ſpread, and ſhew forth their gifts and abilities in Preaching, (or otherwiſe (for benefit of others) as they may doe abroad, where every man may exerciſe every day, or as oft as hee pleaſeth.

Secondly: Fruit-trees in a Nursery muſt not grow there, being ready for tranſplanting, becauſe ſuch hinder many other ſmall young plants

plants, which might be brought into the *Nursery*, to be ingrafted and prepared, if the great ones were transplanted.

So ought it to be in *Universities*; For unlesse the *ancient Students* (having had a convenient time to fit themselves for publique employments) doe remove, many hopefull *young plants* will be kept out, which otherwise, if brought under the discipline of godly Governours, and ingrafted, will (in due season) bring forth much good fruit.

Thirdly: If *Fruit-trees* (after they are prepared in the *Nursery* for fruit-bearing) be removed, and transplanted abroad into severall Countries, many may partake of their fruits, they will be profitable from yeare, to yeare, which cannot be, if they be kept still in the *Nursery*.

So if *University men* (having obtained *Gifts and Graces*) goe forth, & exercise their *Talents* in the Church of God, many may have profit, and advantage by them, who otherwise cannot.

Besides these *Reasons*, the word requires that able, and usefull men should goe forth into the Church of God, Luk. 10. 1. 2. Our Saviour (as a Master, or Governour of a great Society) having disciplined, and taught his *Disciples*, and made them fit for the *Ministrie*, he sent out *Threescore and ten* of them at one time, having sent *Twelve* not long before, Luk. 9. 2. And because the *harvest* is great, & there is need of *Labourers*, we ought to pray the Lord of the Harvest, that he would send forth more. Luk. 10. 2.

But such as are fit, & yet unwilling to goe, may be asked sharply, by way of reproof, why stand yee here all the day idle. Mat. 20. 6. Many stand idle in the Market place, while they might, and ought to goe, and labour in the Lords Vineyard.

Having a *Talent*, or more, they must one day be called to an account what use they have made thereof, & if they have not well employed them, nor gained by them, they will make but a sad reckoning. Mat. 25. 19. *the Lord commeth and will reckon with them.*

The *Inference* hence is in every mans eye, that such whom it concernes, doe consider what their duty is in this regard, and accordingly apply themselves.

It is my humble advice, with all love; Let not any now (as too many in former times) having gotten *Fellowships in Colledges*, account them as 't were, their *free-hold for life*, having accommodations to set up their rest, and say its good being here, what can I

Use.

expect better, should I goe forth, as though *selfe*, were all a man should ayme at.

If any man be offended, and object, why should I meddle thus far: I answer. I am within the bounds of my Orchard, and the subject at first proposed. Not only to treat of Ordering *Materiall Fruit-trees*, but also to hold forth a *spirituall use of them*, where I judge the *Similitude* apt, and pregnant: I am a friend and no adversary in speaking the *truth in Love*.

The Husbandman having purged his *Nursery*, and planted therein many *choyce plants*, (ingrafted into the true *Vine*) he expects *better fruits* there, then former ages have afforded. And it may be spoken to the honour of the Husbandman, (and of the Reformation hitherto carried on by him) that there are *pleasant and wholsome fruits*, brought forth by many *Trees of righteousness* among them, bringing forth *sover, & bitter Grapes*, or *empty Vines* which bring forth fruit unto themselves. That the adversaries of the truth might not have occasion to charge any (especially such as have the name of godly persons) with *Pride, high carriages, earthly mindednesse, and such like grosse corruptions*, which are the foulest *Blots* that can light upon *Professors*, and bring most dishonour to *God, to his Gospell, and to themselves*.

If men in these places have *sincere, and right ends* in their eye, & pursue them accordingly (even the *interest of our Lord Iesus Christ in the increase of his kingdome*) As they might thereby bring much *honour to God, happinesse to themselves, edification to his Church*; So also the same is the right and ready way to *establishe, and perpetuate Universities*.

Therefore take my counsell, and not mine, but the *Apostles*, 2. Tim: 1. 6. *To stirre up the gift that is in thee*; and againe, 1. Tim: 4. 4. *Neglect not the gift that is in thee*.

Such as have *Talents* whereby they may profit the *Church of God*, ought to imploy them for that purpose, according as God hath fitted them.

It is true indeed: Some able men in *Universities* (as godly *Teachers in every Colledge*) besides *Governours*, may be as profitable to the *Church of God* there, as if they went forth; but this reacheth not the generality of men in such places. Therefore the education may be seasonably carried on: I know the best men had need

Esay 61. 3.
Jc 1. 2. 28.
Hose. 10: 3.

neede of stirring up to their duties.

And that this may be willingly imbraced, Consider what neede there is of faithfull, able, and painfull Teachers abroad in every Country: The Harvest truly is great, and such Labourers are but few: Multitudes, Multitudes of people, lye in the gall of bitterness, and bond of iniquity, and would it not be a glorious worke, to be Instrumentall in turning them from darknesse, to light, and from the power of Sathan, unto God: yea; and the worke also will make such Instruments glorious, Dan. 12. 3. *They that be wise, shall shine as the brightnesse of the firmaments, and they that turne many to righteousness, as the starrs for ever, and ever.*

I shall say no more: *verbum sat sapientibus*, there are a world of Encouragements to this worke, rewards, and wages are in it, besides infinite Treasures laid up for them to all Eternity:

Fruit-trees never loose their innate, or naturall properties, but they abide in the Trees, as long as the trees live: They may, (and sometimes do) loose all adventitious properties, such as they have by the Art, and industrie of men, but they never loose their Naturall. All the skill, and power of men, cannot rob the Trees of their Naturall properties, without the destruction of the Trees. 17 Observ: in Nature.

This is another Similitude of the state of Mysticall fruit-trees, and shadows out unto us this Proposition. That,

Saving grace, or the Divine Nature in beleevers, abides in the soule for ever, but common Gifts, or Graces may be lost.

When God gives any soule to Christ, there is then a marriage betweene Christ and that Soule: Now the Bonds and Lawes of Marriage, hold and are in force, so long as the parties live.

The Covenant betweene God and his people is a well ordered covenant, sure, and stedfast, 2. Sam. 23. 5.

Grace in Beleevers, is a spirituall nature, or the Divine nature; And if that all naturall living Creatures, retaine their Naturall virtues and properties, so long as they live, how much more shall the soule, (which is a spirituall substance) hold and keep those spiritually naturall properties, habits, and inclinations, that God fixeth in it.

Holineffe

Holinesse, is a *Divine Nature*, or new Creature which God puts into the Soule of Beleivers, and (in respect of duration) is like unto the *Author* of it, who is *Eternall*.

We are kept by the power of God, through faith, 1 Pet: 1.5. And as God is the Author of faith, so also he is the perfecter of it, Heb: 12.2.

All the *Attributes* of God, are engaged for our perseverance in grace; he is faithfull, who also will do it 1 Thes: 5.23,24.

I will put my feare (this new Nature) *into their hearts, and they shall never depart from me Jer: 32. 40. they shall never loose it, neither shall their enemies take it from them, either with power, or policy, it is impossible. Mark: 24.24. If it were possible they shall deceive the very Elect,* implying, it is not possible.

Multitudes of other Scriptures might be brought to this purpose; but I study brevity throughout all the worke.

But now: such as have but *Common Gifts*, or *Graces* may, and do fall away; These make a Profession for a time (for some selfe, and sinister ends) & after a while fall off, and come to nothing.

They are as a *Bough sticke in the ground without Roots*, that for a while, in the pleasant spring, will bud, and Blossome, like other boughes, (upon living Trees) but in the heate of sommer, it withers, and dyes, see *Observ: 12.*

Many have excellent *naturall parts*, in respect of their apprehension, understanding, Memory, utterance &c. Much Learning, skill, and acquired abilities, and may be able to Preach, Pray, discourse &c. much better, then many of Gods people, they may be *inlightned*, and *tast of the heavenly Gift*, they may receive the word of God with some likeing of it, and in some things conforme unto it; And yet (by degrees) may loose all, or most of these things; for all these, if no more, come short of *true grace*, or *holynesse*, they are common to the *Reprobate*, as well as to the *Elect*. *They went out from us, because they were not of us. 1. Joh: 2.19.* such are as the *stony ground*, Mat: 13,21. *the seede springs, and dyes soone after.*

1 Use.

These things being so, it highly concernes all Professours to looke well to their *Principles*, what they have received, whether true, and saving graces, or but only *Common Gifts*, and *Graces*, left with the *foolish Virgins*, (that had Lamps but no Oyle) they be shut out of heaven, when they expect to enter in.

Hence

Hence we may see the folly, and weaknesse of those who labour more for *Gifts*; then for *saving Graces*; some men bestow more *cost, time, and labour*, for *accomplishments in humane Learning, and Morall abilities*, which may be all *lost*, then they doe for the *wisdom of God, and his Image*, which abide in the soule for ever. Is not this *Esau* like, who preferred a *Messe of Pottage*, before a *blessing*?

How shall any be able to excuse such men from grosse *spirituall folly, blindnesse, and want of Judgment*, who prefer things wherein *Sathan* excells them, before those things which make men resemble *God*.

Surely, there is noe clearer Evidence of darknesse of mind, then for men so labour more earnestly for *Gifts* then for *Graces*, for things that perish, then for *Eternall Treasures*.

The husbandman hath use for many Tooles, and Instruments, about his works in his Garden of Fruit-trees; And if any of them grow dull, and unserviceable for which Ends they were appointed, if his knives, sawes &c: (after often whetting, and filing) will not cut, but become blunt, and dull Tooles, hee layes them aside (or perhaps sometimes in displeasure, throwes them aside) and makes use of some other Instruments that have an edge: He very much approves of sharp Tooles about his works.

18 Observation in Nature.

This shadows out unto us. That, *God* is well pleased with zealous, & active Instruments in his works; But men of dull, indifferent spirits, he (often) layes them aside, & puts others in their stead.

God the Great Mystical husbandman hath great works in hand, in his Garden the Church: *Job* 5. 17. My father worketh hitherto, and I worke: And though he can doe all his works with a word of his Mouth, yet he is pleas'd to make use of many Instruments, in carrying them on.

Now *God* doth very much approve of Zealous, and active Instruments in the works he sets them about; (their zeale being guided with wisdom, and Judgment.) *Ihu*, because he was Zealous and active for *God* in destroying *Ahabs* house, *God* established him, & his posterity, in the Throne, unto the fourth generation: But *Saul*, an eminent Instrument (and set up by *God* himselfe) yet neglecting to doe the Lords work thoroughly, (which was in his power to do) *God* laid him aside in displeasure, & set up *David* (a zealous & active Instrument,) in his stead, to carry on the works he had to do.

2 Kings. 10. 30.

And Eli, (though a good man) and an eminent Instrument in the hand of God, yet when he grew dull, and wanted edge; zeale to suppress the wickednesse of his sonnes, and to honour God in his Office; God was exceedingly displeased with him, and threw him aside (in respect of making use of him any longer) and chose another in his stead, 1 Sam. 3. But how well was God pleased with Phyneas, a man of spirit, and zeale for God: God himselfe stands up for him, and commends him: Phyneas and his sonnes were established in the Priests Office Numb. 25. 13. *He shall have it, and his seed after him, even the Covenant of an everlasting Priesthood, because he was zealous for his God.*

God cannot abide indifferency and lukewarmnesse, in matters concerning his honour, and the interest of his sonne, (which he himselfe is jealous for) a dull, flat, indifferent spirit in these things, is loathsome to God, he cannot beate it, Rev. 3. 16. *Because thou art lukewarm, & neither hot nor cold, I will spew thee out of my mouth.*

Men that act not for God, they act against him, Luk. 11. 23. *He that is not with me is against me.*

Use.

Seeing this is so: It is the safety and wisdom of all men in any place of Power, (higher, or subordinate) to lay out themselves with zeale for God, to be diligent and active Instruments in the designs of God: (acting according to the directions, and leadings of his Word and Providences.)

The advantages will be, not only the honour of God in the enlargement, and establishment of the kingdome of Christ; but also the honour and establishment of such Instruments. God will still delight to employ them in his great works, Numb. 25. 13.

19 Observ:
in Nature.

The Husbandman in Autumn and Winter, is Pruning of his trees; and boughs and branches are scattered up and downe all the parts of the Orchard. He is then digging up the earth, & barring the roots of trees, transplanting some, and setting others in their roomes; and doing many other works which make the Garden lye rough, & unhandisomely; But all these works tend to the greater beauty, pleasure, and delight in the garden afterwards in the spring, and sommer.

This Similitude shadowes out unto us this Proposition (which is cleared by Scripture.)

That the Commotions, troubles, and confusions in the Church of God, will end in the settlement, peace, and glory of it.

God hath a great work to doe in the world, and is now about it.

it, even in our daies; He hath said, *he will shake the heavens, and the earth, and the sea, and the dry land; That he will shake all nations, & the desire of all Nations shall come,* Hag: 26. 7.

When were the Heavens, and the Earth, and the Sea, so shaken as they have been of late yeares, who knowes not of the overturnings, and great alterations, that have been among us both in Church and State. It is God that changeth the times, and the seasons, it is he that putteth downe one, and setteth up another, and all these things are but in order unto the glory of his Church: Yet he will still shake, and overturne the Nations untill he hath established, and settled his sonne Christ, Lord and King over all the Earth, that is his great designe now in hand.

Thus saith the Lord God, remove the Diadem, and take off the Crowne, this shall not be the same, exalt him that is low, and abase him that is high, Ezek: 21. 26.

I will overturne, overturne, overturne it, and it shall be no more, until he come whose right it is, I will give it him.

Christ alone hath right to raigne, and God hath promis'd him the Heavens for his inheritance, and the uttermost parts of the Earth, for his possession: Psal: 2. 8.

And such as oppose him, and stand out in rebellion against him (though they be Kings and Monarchs) and say we will not have this man to raigne over us, he will break such with a rod of Iron, & dash them in peeces like a Potters vessell, Psal: 2. 9. Christ now meets with opposition in coming to enter upon his kingdome; and thence are all the stirres, commotions, and confusions among us; But he will at length prevaile, and the government shall be upon his shoulders, and of the increase of his government, and peace, there shall be no end, the zeale of the Lord of hosts will performe this. Esay. 9. 7.

His Kingdome shall at length be established upon the tops of the Mountaines, and be exalted above the hills, Mica: 4. 1. And after he hath rebuked the strong nations of the earth, and brought them into subjection; Then they shall beat their swords into plowshares, and their speeres into Pruning hookes, and shall learne war no more, but they shall sit every man under his Vine, and under his Fig. tree, and none shall make them afraid, for the mouth of the Lord of hosts hath spoken it. Mica: 4. 3. 4. and againe, Esay 32. 18. My people shall dwell in peaceable habitation, and in sure dwellings, and in quiet resting places.

1 Use.

Let all take notice of the great designe that God hath in hand, in the enlargement of the kingdome of his sonne, and establisshing him in it, and beware they be not found fighters against God. And though men contrive, and bend their strength against God, yet will he carry on his work, and they shall be broken, Esay 8.9. Associate your selves, O yee people, and yee shall be broken in peices, Gird your selves, and yee shall be broken in peices.

2 Use.

This truth is full of Consolations to the Church of God, which hath been long oppressed and kept under by the enemies thereof. For surely the time of deliverance is neere.

As by the budding and blossoming of the Fig-tree; and all other Trees, we know that the Sommer is neere, so the terrible shaking of the Nations, declare that the redemption of Gods people draws neere (these being the last daies) The day of the Churches deliverance (from under the power of Antichrist) hath dawned, Esay 60.1. Arise, and shine, for the light is come, and the glory of the Lord is risen upon thee. Whereas thou hast been forsaken, and hated, so that no man went through thee, I will make thee an eternall excellency, a joy of many Generations: Ver: 15. 20. The Lord shall be thine everlasting light, and the daies of thy mourning shall be ended.

20. Observation in Nature.

The Graft and Stock of the Fruit-tree, are so joynd together, as that they are the one within the other, and so made one intire body. The Graft is within the Stock, in respect of its substance (the stock incloseth some part of it, if claven) And the Stock is within the Graft, by its sap, and moisture giving nourishment to it, whereby it thrives and brings forth good fruits: So they being joynd, & one within the other, are made one body or substance.

This Similitude shadowes out unto us. That.

Believers by ingrafting into Christ, doe live in him, & he in them, and are thereby made one with him.

This truth is clearely held forth unto us in Scripture; It is a great Mystry, not understood, or comprehended by any naturall man, and better understood (in our own spirits by experience) then exprest to others. The Apostle saies 2. Cor: 6. 16. Yet are the Temple of the living God, as God hath said, I will dwell in them, and walke in them. And 1. Joh: 4. 16. He that dwelleth in love, dwelleth in God, and God in him. Believers dwell in God, the father, and in Christ, and in the spirit; and God, and Christ, and the spirit dwell in them. As the spirit is in Believers, so they are in the

the spirit, Gal: 5. 25. *If we live in the spirit, let us also walke in the spirit.*

And now; by this spirituell or mysticall union betweene God; and his people, they are made one with God; Not to be understood as some have said, That every Beleever hereby, is God, and that this Union is a personall union, as it is in Christ, and so advance themselves, and depreesse God, but let us looke upon it with all humility, admiring the love of God. It is true: Beleevers are made one with Christ, 1. Cor: 6. 17. *He that is joynd to the Lord is one spirit.*

And it is the prayer of our Lord Christ (which is certainly heard) that his people, with his father, and himselfe may be one: Joh. 17. 21. *That they all may be one, as thou father art in me, & I in thee, that they also may be one in us.* v. 22. *And the glory which thou gavest me, I have given them, that they may be one, even as we are one,* 23. *I in them, & thou in me, that they may be made perfect in one.*

What a wonderfull mystery is this, that Beleevers should be united to, and made one with God, as the Father, and the Sonne are one. Not in respect of partaking of his essentiall and incommunicable properties which Creatures are incapable of, but in respect of reality, and truth: Beleevers are as truly, and really joynd, & united to Christ as the Branches of a Tree are unto the root.

As the Stock and the Graft are really joynd together, and are one within the other, and made one body, so are Beleevers really united to God, God dwelling in them, and they in God; and are made one spirit with him through Christ, 1. Cor: 6. 17. *He that is joynd to the Lord is one spirit.* And againe, 1. Cor: 12. 13. *By one spirit we are united, &c.*

Seeing Beleevers live in God, and God in them, and that they are made one with him. This shewes us their safe Condition, notwithstanding the malice, and power of all their enemies. They shall never be able to prevaile against Gods people, or to hurt them. The Mercy, the wisdom, power, love, and faithfullnesse of God compasseth them about, for they live in God: This is the Hedge that was about Job: Chap: 1. 10: *Thou hast made an hedge about him, and about all that he hath: so that Sathan could not touch him with out leave.*

2. From hence wee may gather That beleivers shall be sure to persevere in grace unto the end: for they live in God, and from him they

receive all supplies of grace. Seeing Christ is risen up, and dyes no more, beleevers that are in him as really as the graft in the stock, they shall be fed, and nourished by him continually, as the stock feeds, and nourishes the Graft; the Rote is never dry, but still gives sap to the branches, both in winter, and Sommer: so Christ is the vine, and living Vine, the Rote and stock filled with all the fulnesse of God; out of which we all receive grace, for grace, and are nourished with this living Sap, unto Eternall life. *John: 4. 14. Springing up unto Eternall life.*

3. Use.

This Union, and Onenesse betweene us, and God the father, and Christ, should make us live a *body*, and a *Gospeil conversation*, such as becomes our *Relation*. Seeing these things are so, what manner of persons ought wee to be in all holy Conversation. Let us therefore strive to be holy, as God is holy, and perfect, as our heavenly father is perfect: Seeing that we are so neere to God, and *live in God*, we may by eying, and beholding of him, be more, and more changed into his *Image*, and *likenesse*, from one degree of glory to another. *1. Cor. 3. 18.* and so be more, and more partakers of his *divine Nature*: and thereby daily have more *Communion*, & *fellowship* with him; (as two friends being for the most part together, are intimately acquainted, & familiar with each other.) This is the *top Priviledge* of beleevers on this side heaven, we should therefore bring forth fruit answerable to the *spirit*, and *sap* that we receive from Christ our stock, and Rote, wherupon we grow, into which we are implanted.

These

These 20. *Observations in Nature*, with the severall *Propositions*, or *Mysticall Grapes*, cut from *Naturall Fruit-trees*, I have sent abroad first; having many more of distinct kinds (to make up these it may be) an hundred or more) which I thought good (upon severall Accompts) to keepe yet in my own hand; Every particular of these might have beene much enlarged (by *Considerations*, *Motives*, *Means*, &c: as the severall subjects will beare) but I have studied brevity in all, and have presented only, the very *Substance* and *Essentials* of every *Similitude*.

The gracious hand of the mysticall husbandman, engraft every Truth into our hearts, and water it by his spirit, unto fruitfullnesse; that he may delight to come into his Garden, and eate his pleasant fruits.

FINIS.

